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ENTRANCE EXAMINATION PAPERS

ENGLISH I

1. The war has had a effect on studies at my preparatory school.

Complete this sentence by inserting in the blank space an appropriate precise adjective. Then use the sentence as the topic of a concise expository paragraph.

2. Write on one of the following topics an expository composition of about 300 words.

- a.* A recent story and why I like it.
- b.* How maps are made.
- c.* Patriotic airs.
- d.* Misuses of the telephone.
- e.* "History repeats itself."
- f.* A significant event of 1818.
- g.* Everyday uses of geometry (or of chemistry).
- h.* My work during the past summer.

3. On one of the topics below write a narrative or descriptive composition of about 150 words.

- a.* A rainy day at school.
- b.* Chestnutting.
- c.* My grandmother's flower garden.
- d.* The Sunday supplement.
- e.* An old almanac.
- f.* At the dentist's.
- g.* The careless motorman.
- h.* Found in the attic.

Before handing in your answers, revise carefully the spelling, punctuation, and sentence structure.

ENGLISH II

[*Answer one question in each of groups I-IV; answer all questions in group V.*]

GROUP I—DRAMA

1. In what ways is chance or accident made to contribute to the plot of *Hamlet* or of *Macbeth* or of *Julius Caesar*?
2. Discuss the character or conduct of Brutus or of Hamlet or of Macbeth as he appears in the last act of the play.
3. [*Answer with reference to one play only, Hamlet or Macbeth or Julius Caesar.*] What great crimes occur in the course of the action? What punishment, if any, overtakes the perpetrators? In what ways, if at all, is the punishment made to seem natural?

GROUP II—ORATORY

1. What features or conditions does Washington enumerate as likely to disturb the Union and what as likely to foster union?
2. What parts of the *Bunker Hill Oration* would you call expository, what parts historical, and what parts sentimental? Show the appropriateness of each.
3. In the *Speech on Copyright* what examples does Macaulay draw from English literature? How do such examples add force to his argument?
4. What concessions in taxation and representation had England made before the rupture with America? In what ways does Burke make use of these earlier concessions?

GROUP III—POETRY

1. What similar topics drawn from external nature did Wordsworth and his contemporaries write about? Compare two poems having similar topics.

2. Give the substance of the dialogue between Arthur and Bedivere after the last battle.

3. Show how *Il Penseroso* and *L'Allegro* reflect the occupations, interests, and feelings of Milton at the time of their composition. Quote some significant lines.

GROUP IV—ESSAYS

1. Carlyle asks of Burns, "How did coexisting circumstances modify him from without; how did he modify these from within?" Answer the question briefly.

2. Explain how some of the persons mentioned by Emerson in *Manners* realize or fall short of his ideal of a gentleman.

3. What traits gave strength to Johnson's character? Cite instances where these traits appeared in his conduct.

GROUP V—GENERAL

1. In what century did each writer live whose name appears in the foregoing questions?

2. Name some English authors contemporary with Tennyson, and some American authors contemporary with Emerson.

3. Name the heroes of five English or American novels.

GREEK

A. XENOPHON

1. *Translate from Xenophon's Anabasis:*

ἐπεὶ δ' ἐπὶ τῇ τάφρῳ οὐκ ἐκώλυε βασιλεὺς τὸ Κύρου στρατεύμα διαβαίνειν, ἔδοξε καὶ Κύρῳ καὶ τοῖς ἄλλοις ἀπεγνωκέναι τοῦ μάχεσθαι· ὥστε τῇ ὑστεραίᾳ Κῦρος ἐπορεύετο ἡμελημένως μᾶλλον. τῇ δὲ τρίτῃ ἐπὶ τε τοῦ ἄρματος καθήμενος τὴν πορείαν ἐποιεῖτο

καὶ ὀλίγους ἐν τάξει ἔχων πρὸ αὐτοῦ, τὸ δὲ πολὺ αὐτῷ ἀνατετα- 5
ραγμένον ἐπορεύετο καὶ τῶν ὀπλων τοῖς στρατιώταις πολλὰ ἐπὶ
ἀμαξῶν ἦγετο καὶ ὑποζυγίων.

*

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*

ἔνθα δὴ Κῦρος δείσας μὴ ὀπισθεν γενόμενος κατακόψη τὸ
Ἑλληνικὸν ἐλαύνει ἀντίος· καὶ ἐμβαλὼν σὺν τοῖς ἑξακοσίοις νικᾷ 10
τοὺς πρὸ βασιλέως τεταγμένους καὶ εἰς φυγὴν ἔτρεψε τοὺς ἑξα-
κισχιλίους, καὶ ἀποκτεῖναι λέγεται αὐτὸς τῇ ἑαυτοῦ χειρὶ Ἀρτα-
γέρσην τὸν ἄρχοντα αὐτῶν. ὥς δ' ἡ τροπὴ ἐγένετο, διασπείρονται
καὶ οἱ Κύρου ἑξακόσιοι εἰς τὸ διώκειν ὀρμήσαντες, πλὴν πάνν
ὀλίγοι ἀμφ' αὐτὸν κατελείφθησαν, σχεδὸν οἱ ὁμοτράπεζοι
καλούμενοι. 15

B. GRAMMAR

1. Explain the absence of accent on τε (4) and ἐν (5) ;
the accent of ἀπεγνωκέναι (2) and ἐποιεῖτο (4) as compared
with the normal accent of verb-forms seen, e. g., in
ἐκώλυε (1).

2. Write the nominative and genitive singular and the
dative plural of ἄρματος (4), τάξει (5), βασιλέως (10), ὄρη
(18). Give the principal parts of ἐγνωκέναι (2), ἦγετο (7),
ἐγένετο (12).

3. Explain the mood of κατακόψη (8) ; the mood and
tense of ἀποκτεῖναι (11).

C. COMPOSITION

Translate into Greek :

1. Cyrus was not prevented by the king from crossing.
2. Whenever the enemy give trouble, we must keep the
hoplites in order (rank).
3. The exit having been seized,
Cyrus decided to fight.

D. HOMER

Translate :

Βουλὴ δὲ πρῶτον μεγαθύμων ἴζε γερόντων, 16
 Νεστορέη παρὰ νηϊ Πυλοιγενέος βασιλῆος·
 τοὺς ὃ γε συγκαλέσας πυκινὴν ἡρτύνετο βουλήν·
 Κλῦτε, φίλοι· θεῖός μοι ἐνύπνιον ἦλθεν Ὀνειρος
 ἄμβροσίην διὰ νύκτα· μάλιστα δὲ Νέστορι δίω 20
 εἶδος τε μέγεθός τε φυὴν τ' ἄγχιστα ἐώκει.
 στή δ' ἄρ' ὑπὲρ κεφαλῆς, καί με πρὸς μῦθον ἔειπεν·
 εὗδεις, Ἀτρέος υἱὲ δαΐφρονος ἵπποδάμοιο ;
 οὐ χρὴ παννύχιον εὗδειν βουληφόρον ἄνδρα,
 ᾧ λαοὶ τ' ἐπιτετράφεται, καὶ τόσσα μέμηλεν. 25
 νῦν δ' ἐμέθεν ξύνες ὦκα· Διὸς δὲ τοι ἄγγελός εἰμι,
 ὃς σευ, ἄνευθεν ἐών, μέγα κήδετα ἦδ' ἐλεαίρει.
 θωρήξαι σ' ἐκέλευσε κάρη κομόωντας Ἀχαιοὺς
 πανσυδίη· νῦν γάρ κεν ἔλοις πόλιν εὐρυάγυιαν
 Τρώων· οὐ γὰρ ἔτ' ἀμφὶς Ὀλύμπια δώματ' ἔχοντες 30
 ἀθάνατοι φράζονται· ἐπέγναμψεν γάρ ἅπαντας
 Ἥρη λισσομένη· Τρώεσσι δὲ κήδε' ἐφῆπται
 ἐκ Διός· ἀλλὰ σὺ σῆσιν ἔχε φρεσίν.— Ὡς ὁ μὲν εἰπὼν
 ᾤχετ' ἀποπτάμενος, ἐμὲ δὲ γλυκὺς ὕπνος ἀνῆκεν.

1. What is the form ξύνες (26), ἐφῆπται (32), ἀνῆκεν (34)?
2. Explain the case of εἶδος (21), of ᾧ (25), of σευ (27).
3. Write the scansion of 26 and 27.
4. What were the consequences of this vision for the Greek army?

LATIN .

FIRST YEAR LATIN

1. Write the genitive and ablative singular and the genitive and accusative plural of: *initium*, *idem*, *ipsa*, *hoc*, *hiems*, *portus*, *altitudo*, *iter*, *obses*, *onus*, *pectus*.

2. Give the positive, comparative and superlative degrees of the adverbs derived from : *fortis*, *celer*, *malus*, *sapiens*, *proximus*.

3. Give a synopsis in the second person plural (indicative and subjunctive, active and passive) of : *vivo*, *video*.

4. Give the principal parts of : *fugio*, *defendo*, *moveo*, *maneo*, *eo*, *effero*.

5. Mention ten different uses of the ablative case.

6. *Translate into Latin, marking all long vowels in what you write :*

(a) When he had discovered what the enemy were going to do, he remained in camp.

(b) He says these tribes may unite if they wish.

(c) He ought to be put in charge of the fleet.

(d) Galba could not be persuaded to tempt fortune too often.

(e) He waited at home the greater part of the day to prevent anyone from going out.

(f) If they had come to Rome, I should have asked him what business they had there.

7. *Translate :*

Facilius *eis* persuasit, quod undique loci *natura* Helvetii continentur : una ex parte *flumine* Rheno latissimo atque altissimo, qui agrum Helvetium a Germanis dividit ; altera ex parte monte Jura altissimo, qui est inter Sequanos et Helvetios ; *tertia* lacu Lemanno et flumine Rhodano, qui provinciam nostram ab Helvetiis dividit. Pro multitudine hominum et pro gloria fortitudinis angustos *se* fines *habere* arbitrabantur, qui in longitudinem milia passuum ducenta quadraginta, in latitudinem, centum octoginta patebant.

Account for the construction of each italicized word.

II

SECOND YEAR LATIN

1-6. Answer 1, 2, 3, 4, 5 and 6 under First-Year Latin (above).

7. *Translate:*

Hæc omnia Cæsar eodem illo pertinere arbitrabatur, ut tridui mora interposita equites eorum, qui abessent, reverterentur: tamen sese non longius milibus passuum quatuor aquationis causa processurum eo die dixit: huc postero die quam frequentissimi convenirent ut de eorum postulatis cognosceret. Interim ad præfectos, qui cum omni equitatu antecesserant, mittit, qui nuntiarent, ne hostes proelio lacesserent, et si ipsi lacesserentur, sustinerent, quoad ipse cum exercitu propius accessisset.

Account for the mood and tense of each italicized verb and for the case of each italicized noun or pronoun in this passage.

III

THIRD YEAR LATIN

1-4. Answer questions 1, 2, 3 and 4 under First-Year Latin.

5. *Translate:*

(a) Quod si Romae Cn. Pompeius *privatus esset* hoc tempore, tamen ad tantum bellum is erat deligendus atque mittendus; nunc cum ad ceteras summas utilitates haec quoque opportunitas *adjungatur*, ut in eis ipsis locis *adsit*, ut habeat exercitum, ut ab eis, qui habent, accipere statim possit, quid exspectamus? Aut cur non ducibus *dis* immortalibus *eidem*, cui cetera summa cum salute rei publicae commissa sunt, hoc quoque bellum regium committamus?

(b) Quid vero? Ut homines Galli ex civitate male pacata, quae gens una restat quae bellum populo Romano

facere *posse* et non nolle *videatur*, spem imperii ac rerum maximarum ultro sibi a patriciis hominibus oblatam *negligerent* vestramque salutem suis *opibus* anteponerent, id non divinitus esse factum putatis?

Account for the mood and tense of each italicized verb and for the case of each italicized noun or pronoun in both of these passages.

6. *Translate into Latin, marking all long vowels in what you write :*

(a) I know from whom I received this training.

(b) If I were doing this at the request of any one, I should be placing my own interests before the honor of the state.

(c) They knew that, if the pirates had not been conquered, they themselves would have been prevented from going to the provinces.

(d) Would that he were with us !

(e) Do not entrust armies to a commander who can not restrain his own soldiers.

(f) Who would be injured by doing this?

FOURTH YEAR LATIN

1. *Translate :*

(a) Interea classem velis aptare jubebat
 Anchises, fieret vento mora ne qua ferenti,
 Quem Phoebi interpres multo compellat honore :
 " *Conjugio*, Anchisa, Veneris dignate superbo,
 Cura deum, bis Pergameis erepte *ruinis*,
 Ecce *tibi* Ausoniae tellus : hanc arripe velis.
 Et tamen hanc *pelago praeterlabare* necesse est ;
 Ausoniae pars illa procul, quam pandit Apollo.

(b) Continuo auditae voces, vagitus et ingens,
 Infantumque animae flentes, in limine primo,
 Quos dulcis *vitae* exsortes et ab ubere raptos

Abstulit atra dies et funere mersit acerbo.
 Hos juxta falso damnati crimine mortis.
 Nec vero hae sine sorte datae, sine iudice, sedes :
 Quaesitor Minos urnam movet ; ille silentum
 Conciliumque vocat, vitasque et crimina discit.
 Proxima deinde tenent maesti loca, qui sibi letum
 Insontes peperere manu, lucemque perosi
 Projecere animas. Quam *vellent* aethere in alto
 Nunc et pauperiem et duros perferre labores !

Account for the construction of each italicized word in these passages.

From what book of the Aeneid is each of these passages taken? Write briefly on the contents of the first book of the Aeneid?

Write out the first three lines of the last passage, indicating the metrical feet, the principal caesura and the length of each syllable.

Who was Minos? Phoebus? Agamemnon? Ascanius? Aurora?

2. When did Vergil live? What was his main motive in writing the Aeneid?

3. Write the principal parts of *fieret*, *erepte*, *praeterlabare*, *abstulit*, *mersit*, *movit*, *discit*, *peperere*.

4. Write the genitive and ablative singular and the genitive and accusative plural of : *interpres*, *Venus*, *tellus*, *illa* (fem.), *infantum*, *limine*, *mortis*, *iudice*, *sedes*, *sibi*, *manu*, *pauperem*.

FIRST YEAR GERMAN

N. B. State where and when you have studied German.

I.

At the option of the candidate, 20% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question VII.

II.

Translate into English :

Vor einem großen Walde lebte ein Holzhacker mit seiner Frau, der hatte nur ein einziges Kind, das war ein Mädchen von drei Jahren. Sie waren aber so arm, daß sie nicht mehr das tägliche Brot hatten und nicht wußten, was sie ihm zu essen geben sollten. Eines Morgens ging der Holzhacker voller Sorgen hinaus in den Wald an seine Arbeit, und wie er da Holz hachte, stand auf einmal eine schöne große Frau vor ihm, die hatte eine Krone von leuchtenden Sternen auf dem Haupt und sprach zu ihm : „Ich bin die Jungfrau Maria, die Mutter des Christkindleins : du bist arm und dürstig, bring mir dein Kind, ich will es mit mir nehmen, seine Mutter sein und für es sorgen.“ Der Holzhacker gehorchte, holte sein Kind und übergab es der Jungfrau Maria, die nahm es mit sich hinauf in den Himmel. Da ging es ihm wohl, es aß Zuckerbrot und trank süße Milch, und seine Kleider waren von Gold, und die Englein spielten mit ihm. Als es nun vierzehn Jahr alt geworden war, rief es einmal die Jungfrau Maria zu sich und sprach : „Liebes Kind, ich habe eine große Reise vor, da nimm die Schlüssel zu den dreizehn Türen des Himmelreichs in Verwahrung : zwölf davon darfst du aufschließen aber die dreizehnte, wozu dieser kleine Schlüssel gehört, die ist dir verboten : hüte dich, daß du sie nicht aufschließe, sonst wirst du unglücklich.“

III.

1. Give nominative and genitive singular and nominative plural with corresponding form of the definite article (model der Mann, des Mannes, die Männer) of : *Walde* (1), *Frau* (1), *Kind* (2), *Mädchen* (2), *Jahren* (3), *Arbeit* (6), *Mutter* (9), *Kleider* (14), *Schlüssel* (18), *Türen* (20).

2. Form German sentences using the comparative or superlative forms of : *arm*, *heiss*, *viel*, *gut*, *hoch*.

3. Decline throughout : *der schönste Baum* ; *unser schönes, kleines Zimmer* ; *diese alte Feder*.

4. Give the principal parts, with the auxiliary of the perfect tense and the third person, present singular indicative (model : *weggehen, ging weg, ist weggegangen, geht weg*) of : *essen* (4), *stand* (6), *sprach* (8), *bring* (10), *nehmen* (11), *übergab* (12), *geworden* (15), *aufschliessen* (19), *gehört* (20), *verboten* (21).

5. Conjugate in the present and imperfect indicative *lesen, mögen, wissen*.

IV.

Folgende Fragen sind auf deutsch in ganzen Sätzen zu beantworten :

1. Mit wem spielte das Kind im Himmel?
2. Warum übergab der Holzhacker der Jungfrau Maria sein Kind?
3. Wann wurde Washington geboren? (Write out numbers).
4. Wieviel Uhr ist es jetzt? (Write out numbers).
5. Was ist der Unterschied zwischen einem Milchglas und einem Glas Milch?

V.

(a) Complete the following sentences :

1. Ich blieb — Hause ; er ging — — Stadt.
2. Er ritt durch — Dorf ünd über — Brücke.
3. Sie sitzt — Tisch und bittet — ein Stück Brot.
4. Er ging in — Garten ; er wollte in — Schatten unter — Baum sitzen.

(b) Change active to passive in following sentences :

1. Der Hund hat den Knaben gebissen.
2. Man spielt Goethes "Faust" öft im Theater.

VI.

Translate into German :

A week ago we were at home, but today work begins again. I can see some friends here whom I have not seen

for two years. They do not look very happy. Perhaps they think that these questions are too hard. But we can all go home soon for it is nearly six o'clock.

VII.

(Only for those not taking the oral test : Compare Question I.)

Erzählen Sie in etwa 75–100 Worten etwas über die Stadt Ithaca.

oder

Beschreiben sie das Leben auf dem Lande im Sommer.

SECOND YEAR GERMAN

N. B. State where and how long you have studied German.

At the option of the candidate 20% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question V.

I.

Translate into English :

Der berühmte Albertus Magnus (Albert der Große) war zu Lauingen in Schwaben im Jahre 1193 als armer Leute Kind geboren. Schon in seiner Kindheit zeigte er große Lust zum Lernen. Er ging als junger Mann nach Padua in Italien, wo er als ein armer Schüler studierte und auch in den Orden der Dominikaner aufgenommen wurde. Durch seine Gelehrsamkeit und Weisheit brachte er es so weit, daß ihn der Papst zum Bischof von Regensburg ernannte. Obgleich er nun so hoch gestiegen war, so schämte er sich doch seiner armen Eltern nicht, sondern schickte zu ihnen und ließ ihnen sagen, wie er ein großer Mann und Bischof geworden sei, und sich sehne, seine lieben Eltern wieder zu sehen. Da sein Vater und seine Mutter das hörten, machten sie sich eilig auf nach Regensburg. Sie schämten sich aber, sich in ihren armseligen Kleidern vor ihrem Sohne zu zeigen, und als die Leute in Regensburg hörten, wer sie seien, waren sie nur allzufroh, ihnen schöne Kleider zu leihen; denn sie hofften alle, der Bischof werde es ihnen hundertfach und tausendfach

vergelten. Da sie nun so herrlich gefleidet vor den Bischof kamen, fuhr er sie an und sagte: „Wer seid ihr?“ Seine Mutter aber fing an zu weinen und sagte: „Bist du nicht mein eigenes Kind, 20 das ich mit Schmerzen groß gezogen habe, und ist dieser nicht dein Vater?“ Er aber antwortete und sprach: „Mein Vater war ein armer Müller und trug einen bestaubten Rock und meine Mutter war eine arme Frau.“ Da gingen sie beide hinaus, legten die schönen Kleider ab und zogen ihre alten Arbeitskleider 25 an. Und so kamen sie wieder vor den Bischof. Wie der sie erblickte, neigte er sich tief vor ihnen, nahm seine Mutter in die Arme, herzte und küßte sie, so daß sich alle, die zugegen waren, verwunderten.

II.

1. Give the nominative and genitive singular and nominative plural (with the article) of the following nouns: *Kindheit* (l. 3), *Schüler* (l. 5), *Bischof* (l. 7), *Mutter* (l. 12), *Sohne* (l. 14), *Schmerzen* (l. 21), *Müller* (l. 23), *Arme* (l. 28).

2. Decline in both numbers: *junger Mann* (l. 4), *ihren armseligen Kleidern* (l. 14), *mein eigenes Kind* (l. 20).

3. Give the principal parts, the perfect tense with auxiliary, and the present indicative active, third person, of the following verbs, (model: *fortfahren, fuhr fort, ist fortgefahren, fährt fort*): *geboren* (l. 3), *studierte* (l. 5), *brachte* (l. 7), *gestiegen* (l. 8), *liess* (l. 10), *vergelten* (l. 18), *fing an* (l. 20), *sprach* (l. 22), *trug* (l. 23), *gingen* (l. 24).

4. Inflect in the mood and tense in which they are found, the verbs: *aufgenommen wurde* (l. 6), *seid* (l. 19), *gezogen habe* (l. 21), *antwortete* (l. 22).

5. Explain the mood and tense of the following verbs: *geworden sei* (l. 11), *sehne* (l. 11), *seien* (l. 15), *werde . . . vergelten* (l. 17-18).

6. Copy the following sentences, substituting for the dashes, the proper endings: *Die Büch— dies— Student—*

sind in rot—Leder eingebunden. Es sind meistens lateinisch—, deutsch—, und englisch— Werk—, die er von sein—Vater geschenkt bekommen hat: Er ist ein fleissig—, jung—Mensch, der sein— sämtlich— Prüfung— gut bestehen will.

III. .

Translate into German :

The son of a poor father and a loving mother, Albert the Great, was born in Suabia toward the end of the twelfth century. He traveled in foreign countries and studied in Italy. Because of his learning he was made bishop by the Pope. Was he ashamed of his poor parents? No, he asked them to visit him. They came dressed in fine clothes, but he did not know them until they had put on their old clothes, the father the dusty clothes of a miller.

IV.

Bilden sie einige deutsche Fragen und Antworten (zusammen etwa 50 Worte) über Schule und Bibliothek !

V.

(To be answered by those candidates only who do not take the oral test).

Schreiben Sie in deutscher Sprache (in etwa 75 Worten) über Haus— oder Gartenarbeit !

THIRD YEAR GERMAN

N. B. State where and how long you have studied German.

I.

At the option of the candidate, 30% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question VI.

II.

1. Fünf Jahre waren auf diese Weise verflossen, als ein Fremder auf seiner Reise in dem Dorfe einkehrte und in Christians Hause, weil es die ansehnlichste Wohnung war, seinen Aufenthalt

nahm. Es war ein freundlicher, gesprächiger Mann, der vieles von seinen Reisen erzählte, der mit den Kindern spielte und ihnen Geschenke machte, und den in kurzem alle liebgewannen. Es gefiel ihm so gut in der Gegend, daß er sich einige Tage hier aufhalten wollte; aber aus den Tagen wurden Wochen, und endlich Monate. Keiner wunderte sich über die Verzögerung seiner Abreise, denn alle hatten sich schon daran gewöhnt, ihn mit zur Familie zu zählen. Nur Christian saß oft nachdenklich, denn es kam ihm vor, als kenne er den Fremden schon von früher, und doch erinnerte er sich durchaus nicht, wo und wann er ihn schon gesehen haben könnte. Nach einem Vierteljahr nahm der Reisende endlich Abschied und sagte: „Liebe Freunde, ein wunderbares Schicksal treibt mich weiter in die Welt hinaus, ich hoffe aber zu euch zurückzukehren und ich bitte euch, eine Summe Geldes für mich zu verwahren. Komme ich in Jahresfrist nicht wieder hierher, so mögt ihr sie als meinen Dank für eure Freundschaft annehmen.“

2. Nach Neu-England hatte sich zuerst eine größere Anzahl von Ansiedlern hingewandt als nach den mittleren und südlichen Kolonien. Zur Zeit der Revolution war Boston größer als New York. Dieses frühere Uebergewicht Neu-Englands, das durch die Gleichartigkeit seiner kräftigen angelsächsischen Bevölkerung noch verstärkt wurde, hat auf die ganze Entwicklung der Vereinigten Staaten und auf den amerikanischen Volkscharakter einen bedeutenden Einfluß ausgeübt, den man sehr wohl mit der Rolle vergleichen kann, die das alte Griechenland in Europa gespielt hat. Die Geschichte wird dies stets rühmend hervorheben, auch wenn in Zukunft Neu-England durch seine Kleinheit in den Hintergrund gedrängt werden sollte.

III.

Grammatical questions based on the preceding passages for translation.

1. Give the principal parts, with the auxiliary of the perfect tense and the third person singular present indicative (model: *weggehen*, *ging weg*, *ist weggegangen*, *geht weg*), of the following verbs: *verflossen* (1), *gefiel* (7), *kam* - - -

vor (12), *gesehen* (14), *treibt - - - hinaus* (16), *bitte* (17), *annehmen* (20), *hingewandt* (22), *vergleichen* (29), *hervorheben* (30).

2. Give, with the definite article in each case, the nominative and genitive singular, and the nominative plural of : *Jahre* (1), *Dorfe* (2), *Wohnung* (3), *Geschenke* (6), *Gegend* (7), *Tage* (7), *Wochen* (8), *Schicksal* (16), *Ansiedlern* (22), *Staaten* (27).

3. Decline throughout the singular only : *ein Fremder* (1-2), *der Reisende* (15) ; throughout the plural only : *liebe Freunde* (15), throughout the singular and plural : *den mittleren Kolonien* (22-23).

4. Change from direct to indirect discourse the last five lines of passage 1, beginning with *ein wunderbares Schicksal*. Introduce the indirect statement with the words *Der Fremde sagte seinen lieben Freunden*. Use no *dasz*.

IV.

Write to a gentleman or a lady a German letter of about 60 words, stating that you have brought with you a letter for him or her from friends of his or hers in your home town. You have heard that he or she has recently been ill and you wish to know if a call from you would be acceptable. Mention when you will be at liberty to call. Use the proper pronoun of address. Date, address, and sign your letter.

V.

Translate into German :

My dear old grandfather who is more than eighty now comes from Concord, Massachusetts, and is very proud of that. As a boy and young man he knew all the great men and women who have made that small town so famous. Some of the stories he tells are delightful. A year ago, I read Henry David Thoreau's "Walden," a beautiful book in which this author describes the simple life he led in the

woods. Then my grandfather told me laughingly that Thoreau had forgotten to mention how often he came home to visit his mother and especially his mother's pantry (*Speisekammer*).

VI.

(Only for those who do not take the oral test).

Write an exercise in German, of about 75 words, on one of the following topics: *Vorzüge meiner Heimat* or *Ein Vergleich zwischen Weimar und Concord, Massachusetts* or *Mein amerikanischer Lieblingsdichter*.

FIRST YEAR FRENCH

PART I (one hour)

ORAL EXAMINATION

PART II (two hours)

I. *Translate :*

Un riche propriétaire possédait un vaste domaine, et voulant accroître sa fortune, il résolut de faire valoir lui-même ses terres ; il pensait se procurer ainsi plaisirs et profit. Les charmes et les avantages de la vie champêtre le séduisaient ; mais, comme il arrive trop souvent en ce monde, les résultats ne répondirent point à l'attente de notre homme : bien loin de s'enrichir, il s'endetta et pour couper court à ses pertes, il prit un remède héroïque : ce fut de vendre la moitié de ses biens afin de s'acquitter et de louer l'autre moitié pour dix-huit années. Le bail étant près de finir, le propriétaire reçut un jour la visite de son fermier, robuste et laborieux paysan, qui lui apportait le montant du loyer de l'année et qui lui dit ensuite avec un certain air de timidité : " Dans le cas, Monsieur, où vous voudriez me vendre les terres que vous m'avez données à ferme je vous les achèterais volontiers. Comment, s'écria l'autre, vous

seriez en mesure de me les payer comptant ? Expliquez-moi ce mystère. Je possédais en toute propriété le double de ce que vous cultivez et, loin de réaliser les bénéfices, je ne pouvais, comme on dit vulgairement, parvenir à mettre les deux bouts ensemble à la fin de l'année. De quelle façon vous y prenez-vous pour obtenir un résultat tout différent ? Il n'y a rien qui doive vous étonner, repart le fermier ; vous disiez à vos gens : *Allez*, et moi je dis aux miens : *Venez*. Notez la différence. Je ne comprends pas bien, fait le propriétaire. La chose est cependant bien simple, Monsieur, vous donniez des ordres et ces ordres une fois donnés vous ne vous occupiez plus de l'exécution. Tantôt vous restiez au lit, tantôt vous vous livriez à toutes sortes de divertissements ; moi je prêche d'exemple ; je suis à la tête des travailleurs ; je me donne autant de peine qu'eux et quelquefois plus. Toujours le premier au travail, et bien souvent le dernier. Mes employés rougiraient de ne point rivaliser avec moi. Je n'ai jamais oublié les paroles de mon père qui me répétait sans cesse qu'un travail assidu engendre l'économie et la richesse.

II. Give the comparative and superlative of *beau*, *grand*, *petit*. Write a list of the demonstrative pronouns. Conjugate the present indicative of *courir*, the imperfect indicative of *dormir*, the future of *savoir*, the conditional of *avoir*, the past definite of *tenir*, the past indefinite of *boire*, the present subjunctive of *mettre*, the imperfect subjunctive of *suivre*.

III. *Translate :*

He is not at home to-day. She used to go to church every Sunday. She was Italian but her husband was English. If the king should speak to you in French, you should answer in French. They have some bread but no butter. There were five in the box. The children will remain in United States until the end of the war. Let us finish this lesson at once. What are they called ? My

book is not as large as his. Do not take those. We left New York Jan. 1, 1918, and we do not expect to return before the fifteenth of August, 1920.

SECOND YEAR FRENCH

PART I (one hour)

ORAL EXAMINATION

PART II (two hours)

I. *Translate :*

Pour arriver là, nous avons été depuis près de deux heures enserrés entre deux files de soldats qui marchaient en sens inverse l'une de l'autre. Sur notre droite, c'étaient des Anglais qui se rendaient à la bataille, tout propres, tout frais, l'air content et en train, admirablement équipés, avec de beaux chevaux bien gras. Sur notre gauche, c'étaient des artilleurs de France qui en *revenaient*, de la gigantesque bataille, pour *prendre* un peu de repos ; poussiéreux, ceux-ci, avec quelquefois des bandages au bras et au front, mais gardant des mines joyeuses, des figures de santé, et marchant en bon ordre par sections ; ils rapportaient même des chargements de douilles vides qu'ils avaient eu le temps de ramasser, ce qui prouvait bien qu'ils s'étaient retirés sans hâte et sans crainte, en vainqueurs auxquels les chefs ont ordonné quelques jours de répit. On entendait au loin comme un bruit d'orage, d'abord très sourd, mais dont nous nous rapprochions de plus en plus. Dans les champs alentour, les paysans labouraient comme si de rien n'était, incertains pourtant si les sauvages, qui menaient tant de bruit là-bas, n'allaient pas un de ces jours revenir pour tout saccager. Il y avait sur l'herbe des prairies, un peu partout, autour de petits feux de branches, des groupes qui eussent été lamentables sous un ciel sombre, mais que le soleil trouvait le moyen d'égayer quand même : émigrés, en fuite

devant les barbares, *faisant* leur cuisine comme des bohémiens, au milieu des ballots de leurs pauvres hardes empaquetées en hâte pendant le sauve-qui-peut terrible.

Pierre Loti, *La Hyène enragée*.

II. Give the principal parts of the verbs in italics in the passage above. Conjugate the past indefinite of *se rendre*, the perfect subjunctive of *craindre*, the future of *mourir*, the imperative of *aller*, the present subjunctive of *plaire*.

III. *Translate*: I am glad you liked him so much. Don't go there if you are afraid of it. I believe it is true. In all of those towns they used to speak French a few years ago. Neither he nor his mother came before noon. Whom did you see, when you called? That is evidently what he was thinking about. If you had lost them there they would have returned them at once. Send some in order that they may begin at once. How long had she been here when you saw her?

IV. Write a short composition in French of about one hundred words on one of the following subjects:

- (a) L'armée américaine en France.
- (b) Un voyage en bateau.

THIRD YEAR FRENCH

PART I (one hour)

ORAL EXAMINATION

PART II (two hours)

I. *Translate*: It was in 1801. At this time Europe concluded the Peace of Amiens, and Napoleon took his seat on the throne of France. He glanced across the Atlantic, and, with a single stroke of his pen, reduced Cayenne and Martinique back into chains. He then said to his council: "What shall I do with St. Domingo?" The slaveholders said: "Give it to us." But Colonel Vincent, who had

been private secretary to Toussaint L'Ouverture, wrote to Napoleon, saying, "Sire, leave it alone ; it is the happiest spot in your dominions. God raised Toussaint to govern ; races melt under his hand. He has saved you this island." Napoleon is said to have remarked : "I have sixty thousand idle troops ; I must find them something to do." What he meant to say was : "I am about to seize the crown ; I dare not do it in the face of sixty thousand republican soldiers. I must give them work at a distance to do." It was against this man, Toussaint L'Ouverture, who was above the lust of gold, pure in private life, generous in the use of his power, that Napoleon sent his army."

(b) He was ten years old before he began to read. Whatever you think about it, he will agree with you. Obey your parents. Let him come as soon as possible. The book of which I am speaking will be published in about a fortnight. We Americans could do such a thing if it were necessary. Whoever does it will regret it. It is not worth while doing that unless you know you are right.

II. *Translate* : A ceux qui s'informaient près de lui de renseignements biographiques, Albert Samain avait accoutumé de répondre par une formule invariable : "Ma vie n'a pas d'histoire." La phrase décourageait toute sollicitation nouvelle. Il était inutile d'insister. Samain, qui détestait parler de soi ou mettre le public au courant de ses aventures intimes, indiquait de cette façon brève le peu d'importance qu'avaient pris à son endroit les incidents communs de l'existence. Sur sa vie, le fait divers ne pèse pas. Elle ne favorise aucunement les curiosités de l'information. Elle ne se rehausse ni ne s'embarrasse des anecdotes fréquentes où vagabonde d'ordinaire l'indiscrétion des historiographes. La courbe qu'elle dessine est harmonieuse, sans heurt et presque sans surprise, sans déviation brusque du plan où elle se situe, belle, régulière et légèrement monotone.

Il est pur et uni le miroir qui fixe l'image, reculée dirait-on, de la destinée du poète : face mi-voilée qui, dans une sorte de grisaille où la lumière s'atténue, regarde mystérieuse et douce, un doigt sur les lèvres en signe de réserve et de silence. C'est dire que, dans l'atmosphère quasi légendaire déjà dont s'enveloppe cette figure spirituelle, s'estompent et s'effacent, secondaires, tous les éléments incapables d'accuser le côté psychologique d'un être intérieur et pudique et passionné.

L. Bocquet, *Albert Samain*.

Write a short composition on one of the following subjects :

- (a) La conservation des vivres en ce moment.
- (b) Lafayette en Amérique.

FIRST YEAR ITALIAN

1. Give the preterite of *dar*, *uscire*, *parere*, *trarre* ; the present subjunctive of *valere*, *andare*, *porre*, *udire* ; the perfect indicative of *aprire*, *dire*, *venire*, *potere*, *stare*.

2. *Translate into Italian :*

He put it on the table, but some one has moved it. Who is going there to-day ? Either he or I wanted to give it to him but I couldn't. They woke me at five o'clock. It was dark and cold, and it was snowing hard. Victor Emanuel II was the first king of the Third Italy. If I saw him I would have to speak to him. Go and ask him why he didn't read what I wrote. If *he* were here, perhaps he would be able to tell us if Alfieri was a count. Then they looked at each other and began to weep. Go tell them they'll have to do without me. You ought to do something for him instead of letting him suffer so. He must have known them well ; he has lived there for several years. I came, I saw, I conquered.

3. *Translate into English :*

Venerdì 15 febbraio 1823 fui a visitare il sepolcro del Tasso e ci piansi. Questo è il primo e l'unico piacere che ho provato in Roma. La strada per andarvi è lunga, e non si va a quel luogo se non per vedere questo sepolcro ; ma non si potrebbe anche venire dall' America per gustare il piacere delle lagrime lo spazio di due minuti ? E pur certissimo che le immense spese che qui vedo fare non per altro che per procurarsi uno e un altro piacere, sono tutte quante gettate all'aria, perchè in luogo del piacere non s'ottiene altro che noia. Molti provano un sentimento d'indignazione vedendo il cenere del Tasso, coperto e indicato non da altro che da una pietra larga e lunga circa un palmo e mezzo, e posta in un cantoncino d'una chiesuccia. Io non vorrei in nessun modo trovar questo cenere sotto un mansoleo. Tu comprendi la gran folla di affetti che nasce dal considerare il contrasto fra la grandezza del Tasso e l'umiltà della sua sepoltura. Ma tu non puoi avere idea d'un altro contrasto, cioè di quello che prova un occhio avvezzo all' infinita magnificenza e vastità de' monumenti romani, paragonandoli alla piccolezza e nudità di questo sepolcro. Si sente una trista e fremebonda consolazione pensando che questa povertà è pur sufficiente ad interessare e animar la posterità, laddove i superbissimi mansolei, che Roma racchiude, si osservano con perfetta indifferenza per la persona a cui furono innalzati, della quale o non si domanda neppure il nome, o si non domanda non come nome della persona ma del monumento. *Leopardi:*

SECOND YEAR ITALION

2. *Translate :*

a) Ma lasciamo lo scrittore Manzoni ; guardiamo l'uomo. Come, di lui scrittore, non c'è pagina che non possa esser letta, che non giovi a leggerla, così di lui uomo non c'è atto che non possa esser detto. Non si mescolò nel tumulto della vita pubblica ; ma, nei tempi o agitati o tranquilli

che visse, serbò intatta sempre la dignità sua e la sincerità dei suoi sentimenti. La sua giovinezza cadde nei giorni, tristi e gloriosi, che seguirino la rivoluzione francese. Come la mente degli altri suoi contemporanei più adulti di lui, così la sua fu pronta ad accogliere le speranze di libertà, che venivano di Francia. Ma che, al contatto del fatti, così negli altri migliori come in lui, quel movimento disceso d'oltre Alpi apparisse mescolato di molta vanità, malvagità e menzogna, e non servisse se non a ridestare più ardente, più preciso il sentimento dell' indipendenza nazionale e la voglia, se n'ha prova sì nei suoi scritti, sì in tutta quanta la sua vita. In un sermone del 1804 diceva di non aver voce che valesse a cantare.

Le battaglie, le leggi e i rinnovati
Fra noi Greci e Quiriti.

Nel 1814, innanzi che la Lombardia fosse sicuramente dell'Austria, sperò e s'augurò, e cantò in una canzone la speranza e l'augurio che potesse rimanere padrona di se. Rinnovò la speranza e il canto l'insurrezione del 1815; e scrisse de nuovo una canzone al *Signor che la parola ha proferita, Che tante etadi indarno Italia attese*. Nel 1816 scrisse il *Coro del Carmagnola* così pieno d'una italianità ardente e sublime. Chi non ricorda

D'una terra son tutti ; un linguaggio.
Parlan tutti ; fratelli li dice
Lo straniero : il comune lignaggio
A ognun d'essi dal volto traspar.—*R. Bonghi.*

- b). Erano i capei d'oro all'aura sparsi,
Che'n mille dolci nodi gli avvolgea';
E'l vago lume oltra misura ardea
Di quei begli occhi, ch'or ne son sì scarsi
E'l viso di pietosi color farsi,
Non so se vero o falso, mi[?]parea :
I' che l'esca amorosa al petto avea,
Qual meraviglia se di subit' arsi?
Non era l'andar suo cosa mortale,

Ma d'angelica forma ; e le parole
 Sonavan altro che pur voce umana.
 Uno spirto celeste, un vivo sole
 Fu quel ch'i' vidi ; e se non fosse or tale,
 Piaga per allentar d'arco non sana. — *Petrarch.*

Translate :

An Italian poet inquired of one of his friends what he thought of his last new work. "I have arrived at the fifteenth canto," replied the friend : "and I am not afraid to affirm that I never read more beautiful and harmonious poetry in the Italian language." "I beg pardon," replied the author, "there is one thing in the language which I must confess is far superior." "Oh ! you perhaps mean one of the masterpieces of Italian literature, the work of Ariosto or of Tasso." "No ; I mean my sixteenth canto."

THIRD YEAR ITALIAN

1. *Translate :*

Ascoltando, chinai in giù la faccia ;
 Ed un di lor (non questi che parlava)
 Si torse sotto il peso che lo impaccia :
 Ed videmi e conobbemi e chiamava,
 Tenendo gli occhi con fatica fisi
 A me, che tutto chin con loro audava.
 'O', dissi lui, non sei tu Oderisi,
 L'onor d'Agobbio, e l'onor di quell'arte
 Che alluminare chiamata è in parisi ?
 'Frate', diss' egli, 'più ridon le carte
 Che pennelleggia Franco Bolognese :
 L'onore è tutto or suo, e mio in parte
 Ben non sare' io stato sì cortese
 Mentre ch' io vissi, per lo gran desio
 Dell 'eccellenza, ove mio core intese.
 Di tal superbia qui si paga il fio ;
 Ed ancor non sarei qui, non fosse

Che, possendo peccar, mi volsi a Dio.
 O vanagloria dell 'umane posse,
 Com' poco verde in sulla cima dura.
 Se non è giunta dall 'etati grosse !
 Credette Cimabue nella pittura
 Tener lo campo, ed ora ha Giotto il grido
 Sì che la fama di colui è òscura.
 Così ha tolto l'uno all 'altro Guido
 La gloria della lingua ; e forse è nato
 Chi l'uno e l'altro caccierà di nido.
 Non è il mondan romore altro che un fiato
 Di vento, che or vien quinci ed or vien quindi,
 E muta nome, perchè muta lato.

(DANTE, PURG. XI, 73-102.)

(b.) Verso gli nomini grandi, e specialmente verso quelle in cui risplende una straordinaria virilità, il mondo è come donna. Non gli ammira solo, ma li ama, perchè quella loro forza l'innamora. Spesso, comme nelle donne, l'amore verso questi tali è maggiore per conto ed in preporzione del disprezzo che essi mostrano, dei mali trattamenti che fanno, e delle stesso timore che ispirano agli uomini. Così Napoleone fu amatissimo dalla Francia, ed oggetto, per dir così, di culto ai soldati che egli chiamò carne di cannone, e trattò come tali. Così tanti capitani che fecero degli uomini simile giudizio ed uso, furono carissimi ai loro eserciti in vita, ed oggi nelle storie fanno invaghire di sè i lettori. Anche una sorte di brutalità e di stravaganza piace non poco in questi tali, comme alle donne negli amanti. Però Achille è perfettamente amabile: laddove la bontà di Enea e di Goffredo, e la saviezza di questi medesimi e di Ulisse, generano quasi odio.

LEOPARDI, *Pensieri*.

2. *Translate into Italian*: From Naples, Addison returned to Rome by sea, along the coast which his favorite Virgil had celebrated. The felucca passed the headland where the car and trumpet were placed by the Trojan ad-

venturers on the tomb of Misenus, and anchored at night under the shelter of the famed promontory of Circe. The voyage ended in the Tiber still overhung with dark verdure, and still turbid with yellow sand, as when it met the eyes of Aeneas. From the ruined port of Ostia, the stranger hurried to Rome; and at Rome he remained during those hot and sickly months when, even in the Augustan age, all who could make their escape fled from mad dogs and from streets black with funerals, to gather the first figs of the season in the country. It is probable that, when he, long after, poured forth in verse his gratitude to the Providence which had enabled him to breath unhurt in tainted air, he was thinking of the August and September which he had passed at Rome.

MACAULAY, *Essay on Addison*.

FIRST YEAR SPANISH

I. Dictation and oral.

II. (a) Give a list of the conjunctive pronoun objects.

(b) Count by sevens from 4 to 44, writing out the numbers.

(c) Give the plural of *nariz*, *lección*, *método*, *fácil*, *pie*.

III. Conjugate the following :

(a) Present indicative of *contar*, *querer*, *decir*.

(b) Imperfect indicative of *ir*, *llevar*.

(c) Future indicative of *haber*, *venir*.

(d) Preterite indicative of *pedir*, *dormir*, *empezar*.

(e) Conditional of *poner*.

(f) Present subjunctive of *saber*, *hacer*, *sentir*.

(g) Past subjunctive of *ser*, *estar*.

(h) Synopsis (1st singular of all simple tenses) of *morir*, *caber*, *dar*, *calentarse*, *corregir*.

IV. *Translate :*

1. Many of my friends don't like it, but I do.

2. Can you tell me what is the largest city in Spain?
3. That boy to whom you were talking has been studying Spanish for more than two years.
4. The teacher gives us long Spanish lessons, but we always learn them rapidly and easily.
5. Don't do that ; you will cut your hands.
6. My friend told them that Spanish trains were better than we Americans thought.
7. He is very sorry that you cannot go with us to the theater.
8. Please sit down a minute. I should like to do so, but I must look for my sister who was to be here at a quarter to five.
9. They want you to show them your new book.
10. It is the one we used to read in our class.
11. You must be hungry after your long walk.
12. Yes, and we are very cold too ; the weather has been bad for almost two weeks.
13. Didn't you tell me that your father was better today?
14. Yes, the doctor said he could go out for a short walk this afternoon.
15. If I had had the time, I would have written you a long letter.

V. *Translate :*

Poco después Pepe se presentaba en el comedor.

Si almuerzas fuerte, le dijo Doña Perfecta con cariñoso acento, se te quitará la gana de comer. Aquí comemos a la una. Las modas del campo no te gustarán.

—Me encantan, señora tía.

—Pues di lo que prefieres : ¿almorzar fuerte ahora, o tomar una cosa ligera para que resistas hasta la hora de comer?

—Escojo la cosa ligera para tener el gusto de comer con Uds.; y si en Villahorrenda hubiera encontrado algún alimento, nada tomaría a esta hora.

—Por supuesto, no necesito decirte que nos trates con toda franqueza. Aquí puedes mandar como si estuvieras en tu casa.

—Gracias, tía.

—¡Pues, cómo te pareces a tu padre!—añadió la señora, contemplando al joven mientras éste comía. Me parece que estoy mirando a mi querido hermano Juan. Se sentaba como te sientas tú. En el modo de mirar, sobre todo, sois como dos gotas de agua.

Pepe la emprendió con el frugal desayuno. Las expresiones, así como la actitud de su tía y prima, le infundían tal confianza, que se creía ya en su propia casa.

—¿Sabes lo que me decía Rosario esta mañana?—indicó Doña Perfecta, fija la vista en su sobrino.—Pues me decía que tú, como hombre hecho a las pompas y etiquetas de la Corte y a las modas del extranjero, no podrás soportar esta sencillez un poco rústica en que vivimos.

—GALDÓS: *Doña Perfecta*.

SECOND YEAR SPANISH

I. Dictation and oral work.

II. (a) When are the cardinal numbers used in Spanish when the English uses the ordinals?

(b) Write sentences showing some of the idiomatic uses of *haber*, *hacer* and *poner*.

(c) Illustrate in sentences *four* uses of the subjunctive in Spanish.

(d) Give a synopsis (1st sing. of all simple tenses) of *oír*, *caer*, *caber*, *herir*, *traducir*, *elegir*.

III. (a) What are the peculiarities in conjugation of radical-changing verbs of the first class? Give *ten* verbs of this class.

(b) Give the present subjunctive (1st sing.) of each of the following verbs : *pedir, haber, salir, dar, reír*.

IV. *Translate :*

I just heard that your friend John is going to leave for South America next summer.—Yes, and I'm pretty sure of going along with him.—Is that so? When do you expect to start?—I don't know yet, but I finish my final examinations on June 21st and there is a fine, big boat leaving New York on the following Saturday.—How long does it take to get there?—About a week to Cartagena, they tell me. You remember that John is going to work in Peru and he wanted me to go along to see what sort of place it is.—There must be a lot of opportunities there, for I hear that they are beginning to develop the copper mines.—You know our old schoolmate Carlos is in Buenos Aires. I just got a letter from him. He likes it pretty well, but I'm afraid he will soon return to the United States.—What's the trouble?—Why, you see, he is in the office of an English firm where Englishmen generally get the best jobs. So he is beginning to feel that his chances of advancement are not what he had hoped for.—That's too bad for him, but I should certainly like to see him again on old Broadway. Give him my regards when you write and tell him I've been waiting a year and more for a letter from him.

V. *Translate :*

En efecto, se decía Florencia, Daniel monta a caballo con frecuencia ; nunca he sabido dónde pasa las tardes. Muchas noches, la de ayer por ejemplo, se ha retirado de mi casa a las nueve. Nunca me ha ofrecido la relación de su prima. Por otra parte, esta mujer que lo sabe todo ; que tiene a su servicio todos los medios que le sugiere su espíritu perverso para saber cuanto pasa y cuanto se dice en Buenos Aires ; esta mujer que me ha hablado con tal seguridad ; que posee pruebas, según me ha dicho. Esta mujer que no tiene ningún motivo para engañarme y aborrecerme. ¡ Oh, es

cierto, es cierto, Dios mío ! exclamaba Florencia, oprimiendo con una de sus manos su perfilada frente, cuyo color de rosa huía y reaparecía en cada segundo. Y su cabeza se perdía en un mar de recuerdos, de reflexiones y de dudas.

MÁRMOL : *Amalia*.

Un jornalero intentó quitarse la vida dos veces arrojándose al río, y otras tantas lo impidió el molinero del lugar, echándose a nado para salvarle. Este desgraciado, decidido a terminar su carrera, se aprovechó del momento en que creyó que el otro no le veía, y fué a ahorcarse a la puerta del molino. El molinero le vió, pero no quiso ya contrariar sus deseos, y le dejó colgado. Algunas horas despues llegó el amo, y viendo aquella desgracia, le preguntó por qué había dejado perecer aquel hombre a su vista.—Señor, respondió, dos veces le he sacado del río esta mañana ; y como estaba mojado de los pies a la cabeza, he creído que se había puesto ahí para secarse.

THIRD YEAR SPANISH

I. Dictation and oral work.

II. Write a letter in Spanish to a friend describing your most interesting experiences of the past summer.

III. Write a composition in Spanish on one of the following topics :

- (a) Plans for national defense.
- (b) The Panama Canal in its relation to South American commerce.
- (c) America and the submarine menace.
- (d) Cornell as a military university.

IV. Translate idiomatically into the most suitable English :

- (a) ¡ Quién supiera hacerlo !
- (b) Se puso como la grana.
- (c) Llegado que hubo, se lo dijo.

- (d) Se murió por ella.
- (e) No es mucho que lo diga ella.
- (f) Echó la llave a la puerta.
- (g) Tomaron las de Villadiego.
- (h) Lo hicieron todo en un quítame allá esas pajas.
- (i) En esa casa pasamos las de Caín.
- (j) Donde fueres, haz lo que vieres.

V. *Translate :*

The first day of school ! Everyone can remember with what excitement, enthusiasm and fear we greeted those eventful days in the long ago. It meant rising earlier, books hunted out of their places of long retirement, faces washed and hair combed, and dinner-baskets. The first day was always the beginning of a new era to the little folks who had never experienced the actual coming into contact with a school teacher ; the older children had discovered that the teachers were just men and women of like passions as themselves. However, the child that has never known the luxury of an old country school house, in the edge of the woods, or near a creek, the big playground, the coveted joy of " passing the water to the school " on a hot day, may have enjoyed superior training in the stately graded schools, fully equipped with the latest methods of teaching ; sliding down the fire escape, etc. ; but he has missed a chapter in life which nothing can duplicate.

VI. *Translate :*

Tú sabes que en mis horas de tedio o de malestar, tenía la costumbre de abandonar la ciudad, y tomando un carruaje o el tren me dirigía a disfrutar del cielo, del aire y de los perfumes vírgenes de la naturaleza.

Consecuente con esa mi costumbre, acabo de salir de Santiago, y héme aquí entre los bañistas de Apoquindo, sentado cómodamente en el comedor del hotel y fumando mi pipa. Al frente se extiende una cadena de montañas, en cuyas cumbres empiezan a acumularse las nieves. A su

pie se descubren, medio velados por la bruma, los edificios de Santiago. El terreno forma una hondonada, que se levanta suavemente hasta la meseta en que está la casa de baños, apoyada en los cerros que le suministran las aguas de sus bulliciosas vertientes. En esta hondonada hay algunas pobres chozas, precedidas de pequeños jardines, plantados para atender al alimento de las abejas y ofrecerles materia prima para sus trabajos. Un camino, abierto a través de las ondulaciones del terreno, ostenta a uno y otro lado las cercas de algunas propiedades, formadas por espinos raquíticos, eucaliptus perfumados, verdes nogales y lustrosos olivares. De trecho en trecho algunos álamos gigantesos cubiertos de amarillentas hojas que se desprenden y vuelan, se arremolinan y descienden cual si fueran las mariposas del invierno perseguidas por las brisas heladas de los altos Andes.

Santiago Estrada.

HISTORY A—ANCIENT HISTORY

In each answer give dates.

PART I

(Required)

1. Sketch the lives of any two of the following persons, selecting one from group (a) and one from group (b), and show, where possible, in what ways their lives affected their own and later times :

(a) Themistocles, Socrates, Pericles, Euripides ; (b)
Gaius Gracchus, Vergil, Constantine, Genseric.

PART II

(Answer one question)

2. Give an outline of the political history of Egypt from the 18th Dynasty to the Roman Conquest.

3. Indicate the causes, chief events, and effects of the Peloponnesian War.

4. Describe the leading systems of writing in vogue in the ancient world.

PART III

(Answer one question)

5. Sketch the development of the Athenian Empire.

6. How did Sparta differ from Athens in its relations to its allies?

7. Compare the democracy of Athens with that of Rome.

PART IV

(Answer one question)

8. Give an account of the First Punic War. What were the causes that led Rome into a conflict with Carthage?

9. Sketch the character of Augustus. Illustrate his policy as a statesman.

10. What were the effects of the German Invasions (a) upon Rome, (b) upon the invaders?

PART V

(Required)

11. Select any two of the following topics and discuss each with some degree of fullness: (a) Homer; (b) the Parthenon; (c) The Roman Poets; (d) The condition of slaves in Greece and Rome; (e) Rome and Belgium.

PART VI

(Required)

12. Write brief notes on four of the following terms, showing that you have definite knowledge of their origin: oligarchy, triumvirate, ostracism, plebeians, symposium, Academy, praetor.

PART VII

(Required)

13. On the map :

(a) Shade the land acquired by Rome in the year 146 B. C.

(b) Bound the Persian Empire at the end of the reign of Cambyses.

(c) Locate and name seven of the following places :

The capital of the Hittites ; the greatest commercial city of Phoenicia ; the capital of Sennacherib ; a city captured by Nebuchadnezzar ; the place of Philip's victory over Greece ; site of the last battle in the Peloponnesian War ; the greatest Greek colony in Sicily ; the place of the battle between Caesar and Pompey ; three important cities in Egypt ; the capital of Phrygia.

MEDIEVAL AND MODERN HISTORY

1. Where have you studied this subject ?
2. How long ?
3. With what text-book or text-books ?
4. What else have you read on the subject ?

GROUP I

(Answer two questions)

1. Name the Germanic peoples who settled in the Roman Empire, telling what you can of the route of each, the region of their final settlement, and the methods by which they mastered and governed the peoples they found there.

2. How did the empire of Charles the Great (Charlemagne) go to pieces ? Into what pieces ? Who were the Normans,—the Saracens,—the Hungarians ; and what part had each in its dissolution ?

3. What territories were governed by Charles the Bold of Burgundy? To what great-grandson did most of them pass, and what other lands did that prince inherit?

GROUP II

(Answer *one* question)

1. What was the Civil Law? What the Canon Law? How did Feudal Law differ from either? In what courts was each used, and for what sorts of cases?

2. What was an Archbishop? What was a Cardinal? How in theory was a Bishop chosen? Who else in fact had often a part in the choice?

GROUP III

(Answer *both* questions)

1. Locate on the map Rhodes,—Austrasia,—Muscovy,—Flanders,—Apulia,—Aragon,—Palermo,—Uri,—Brittany,—Constance. State in your paper the situation of each, and tell something you have learned of it in medieval or modern history.

2. Mark on the map.

a) The Elbe, Loire, Po, Meuse, Garonne, Weser, and Scheldt.

b) The names and boundaries of the lands gained by France after the Italian War of 1859, and the lands lost by France after the Franco-Prussian War.

c) The name and location of five of the following places: a free city of the present German Empire; birthplace of Napoleon I; capital of Piedmont; the meeting-place of the great European Congress of 1815; capital of Bohemia; Verdun, Rheims, Soissons, Chateau-Thierry.

GROUP IV

(Answer *one* question.)

- (1) State the date and the historical importance of five of the following events in the religious wars: Battle of Kappel, Peace of Augsburg, Edict of Nantes, Union of Utrecht, Battle of Lützen, Peace of Westphalia?
- (2) Write an account of the reign of Louis XIV, describing the work of three of his most important ministers and the conduct of his last war.

GROUP V

(Answer *two* questions)

- (1) Why is England so strongly opposed to any great Continental power gaining possession of Holland and Belgium? On what occasions have these motives led England to take part in Continental wars?
- (2) Why were France and Prussia at war in 1757, in 1792, and in 1870? Does the war between France and Germany which began in 1914 concern any question that appeared in these earlier wars? If so, what?
- (3) What did the term Kingdom of the Netherlands mean in the period 1815–1830? What has it meant since 1830? Distinguish between the United Netherlands and the Spanish Netherlands in the year 1600. Who is the great hero in the history of the Netherlands and why is he a hero?

AMERICAN HISTORY AND CIVICS

In what school did you study American History and Civics? How many weeks? How many hours a week? What text-book did you use? What books in addition to the text-book were used?

AMERICAN HISTORY

GROUP I. (*Answer two questions*)

1. Discuss the physical features of the region between the Appalachian System and the Atlantic Coast with reference to their influence upon the early settlements and upon the westward expansion of the settled areas.

2. Give an account of the settlement of Maryland, from 1633, with reference to the grant, to the form of government, relative proportions of Catholics and Protestants, and to any other significant facts in the history of the colony before 1776.

3. What part was played by the Dutch in the early history of America? What places did they settle? What customs or institutions did they introduce?

GROUP II. (*Answer two questions.*)

1. Write something of significance about the following persons:—Roger Williams, Mrs. Anne Hutchinson, John Cotton, Sir Edmund Andros, George Calvert.

2. In what colonies did slavery exist to any considerable extent at the time of the Revolution? When and under what circumstances was it introduced into America? What was the attitude of the Quakers toward it? When did slavery begin to disappear in the region north of Maryland?

3. What was manufactured in the colonies in the decade before the Revolution? What were the principal articles of ocean commerce and with whom was the exchange made?

GROUP III. (*Answer one question.*)

1. Discuss the Loyalists of the American Revolution. From what classes did they come? How were they treated during and after the Revolution? Is there a different opinion now as to their merits?

2. Discuss Benjamin Franklin with reference to the Revolution. What services did he render the cause of independence 1775-1783?

3. Mention with brief comment, and in their order, the events of 1763-1776, which led to the Declaration of Independence.

GROUP IV. (*Answer one question.*)

1. Discuss the Jacksonian Period (1820-1850) with reference to social changes, new methods in politics, and any other matters illustrative of the times.

2. Describe the origin of the Republican party after 1854. What political elements were joined to make the party? What position was taken in regard to slavery?

CIVICS

(*Answer two questions.*)

1. What is the compact theory of the Constitution as set out by Hayne in the Webster-Hayne debate in 1830? How was this answered by Webster? Are there survivals of their opposing views in the minds of men today? Explain.

2. What was the influence of Chief Justice John Marshall, 1801-1835, upon the development of the Constitution of the United States?

3. Mention the several respects in which Federal legislation looking to a more effective prosecution of the present war surpasses similar legislation during the Civil War.

4. What are the arguments against the convention for the purpose of nominating candidates? What are the weak points of the direct primaries?

ENGLISH HISTORY

NOTE. For 1 unit of credit, answer three questions from Group I and two questions from Group II. For $\frac{1}{2}$ unit of credit, answer four questions from either Group. Give dates wherever possible.

GROUP I

1. Give an account of the introduction of Christianity into England. What was the Synod of Whitby and what its results?
2. Describe the Danish invasions and conquest of England.
3. Describe a typical manor of a period before 1400 A. D.
4. What were the causes of the Hundred Years War? Trace its course subsequent to the Treaty of Bretigny, and give its results.
5. Give brief accounts of : (a) Ethelred II ; (b) King Stephen ; (c) Wat Tyler ; (d) Chaucer ; (e) Wiclif.

GROUP II

6. Give an account of the reign of Henry VII.
7. What were the causes of the strife between Elizabeth and Mary, Queen of Scots? Trace its course and show its importance.
8. What were the aims and what the achievements of the foreign policy of the Protectorate?
9. Give the immediate antecedents of the present war ; the causes of Great Britain's entrance into it ; and estimate the importance of the part Great Britain is playing in it.
10. Give brief accounts of : (a) Drogheda ; (b) Trial of the Seven Bishops ; (c) Titus Oates ; (d) Corn Laws ; (e) Kitchener of Khartoum.

ELEMENTARY ALGEBRA

1. Factor into simplest factors :

a) $8A^2 + 23AB - 3B^2$;

b) $ax^3 + 1 + a + x$;

c) $x^{12} - y^{12}$.

2. At what time between five and six o'clock are the hands of the clock together ?

3. Simplify
$$\frac{\sqrt{3} + 5\sqrt{12}}{\sqrt{27} + 3\sqrt{75}}$$

4. Simplify
$$\frac{\frac{a}{a-b} - \frac{a}{a+b}}{\frac{b}{a-b} + \frac{a}{a+b}}$$

5. Solve
$$\begin{aligned} x^2 + 3y^2 &= 28 \\ x - 2y + 5 &= 0. \end{aligned}$$

6. A field is twice as long as it is wide and increasing its length by 20 rods and its width by 30 rods increases its area by 2200 square rods. What are the dimensions of the field ?

INTERMEDIATE ALGEBRA

1. Express
$$\frac{5x-3}{x^3-x^2+3x+5} - \frac{13x}{2x^3+x^2+25}$$
 as a single fraction in its lowest terms.

2. Find the value of
$$\frac{(5x-2)^{\frac{2}{3}}(x+3)^{x-2}}{6x^{-2}}, \text{ when } x=2.$$

3. Expand and simplify
$$\left(2x^2 - \frac{1}{3x}\right)^6.$$

4. The weight of an iron sphere varies as the cube of its diameter. If a solid sphere 6 inches in diameter weighs 30 lbs., how much will a hollow spherical shell weigh if its outside diameter is 6 in. and the diameter of the inside hollow is 4 in.

5. Find the sum of 12 terms of the geometrical progression

$$\frac{\sqrt{2}}{18} + \frac{1}{9} + \frac{2}{9\sqrt{2}} + \frac{2}{9} + \dots$$

6. It took a number of men as many days to build a sidewalk as there were men, but had there been three more workmen employed the work would have been done in four days. How many men were employed?

ELEMENTARY AND INTERMEDIATE ALGEBRA

1. Factor into simplest factors :

a) $8A^2 + 23AB - 3B^2$;

b) $ax^3 + 1 + a + x$;

c) $x^{12} - y^{12}$.

2. At what time between five and six o'clock are the hands of a clock together?

3. Simplify $\frac{\sqrt{3} + 5\sqrt{12}}{\sqrt{27} + 3\sqrt{75}}$.

4. The weight of an iron sphere varies as the cube of its diameter. If a solid sphere 6 inches in diameter weighs 30 lbs., how much will a hollow spherical shell weigh if its outside diameter is 6 inches and the diameter of the inside hollow is 4 inches?

5. Find the sum of 12 terms of the geometrical progression $\frac{\sqrt{2}}{18} + \frac{1}{9} + \frac{2}{9\sqrt{2}} + \frac{2}{9} + \dots$

6. It took a number of men as many days to build a sidewalk as there were men, but had there been three more workmen employed the work would have been done in four days. How many men were employed?

7. Expand and simplify $\left(2x^2 - \frac{1}{3x}\right)^6$.

ADVANCED ALGEBRA

1. Simplify
$$\frac{x(1+x^2)^{-\frac{3}{2}}}{\sqrt{\left(1 - \frac{\sqrt{1+x^2} + 1}{2\sqrt{1+x^2}}\right)\left(\frac{1 + \sqrt{1+x^2}}{2\sqrt{1+x^2}}\right)}}$$

2. In how many ways can ten books be arranged on a shelf if three of them, specially bound, are to be kept together?

3. Verify the fact that $x = 1 + \sqrt{-4}$ is a solution of the equation $3x^3 - 7x^2 + 17x - 5 = 0$. Give another root of this equation.

4. Solve the following pair of equations

$$\begin{aligned} x(6 - x + x^2) &= y + x^3, \\ x^2 &= 3(2x + y). \end{aligned}$$

How many solutions do you get?

5. Find the value of the determinant

$$\begin{vmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 1 & 2 & 3 & 4 & 5 & 0 \\ 1 & 2 & 3 & 4 & 0 & 0 \\ 1 & 2 & 3 & 0 & 0 & 0 \\ 1 & 2 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \end{vmatrix}$$

6. A wall 3 ft. high is 8 ft. away from a tall building. A ladder 15 feet long rests on top of the wall, and has its upper end against the building and its foot on the ground outside the wall. How far is the foot of the ladder from the wall? Find two solutions.

PLANE GEOMETRY

1. A segment is cut from a circle whose radius is 5 feet by a chord whose length is 6 feet. Find the length of the perpendicular to the chord from the middle point of the arc of the segment.

2. The area of a trapezoid is equal to one-half the product of its altitude and the sum of its bases.

3. If two triangles have an angle of one equal to an angle of the other and the including sides proportional, the triangles are similar.

4. Find the locus of the third vertex of a triangle, given two vertices and the size of the angle at the unknown vertex.

5. A line joining the midpoints of two sides of a triangle is parallel to the third side.

6. The three altitudes of a triangle meet in a point.

7. Construct a triangle whose area is equal to that of a given quadrilateral.

SOLID GEOMETRY

1. If two angles, not in the same plane, have their sides respectively parallel and lying on the same side of the line joining their vertices, the angles are equal, and their planes are parallel.

2. Between two lines not lying in the same plane, one and only one common perpendicular can be drawn.

3. Find the volume generated by an equilateral triangle with sides two inches long, which is revolved about a line in its plane through one vertex and perpendicular to one of the sides through that vertex.

4. On a certain sphere an equilateral spherical triangle has an area of 4 square feet. Each angle of the spherical triangle is 65 degrees. Find the radius and volume of the sphere.

5. Find the volume of a right circular cylinder if its altitude is 2 ft. and its total surface is 5π sq. ft.

6. How far from the vertex of a right circular cone, altitude H , should a plane be passed in order to divide the lateral area into two equal parts?

PLANE TRIGONOMETRY

1. Find the radius of a circle inscribed in an equilateral triangle whose perimeter is 36 in.

2. Derive the formula for $\cos (A + B)$, when A and B and $A + B$ are positive angles less than 90° .

3. Prove the identity

$$\sin^2 A - \sin^2 B = \sin (A + B) \sin (A - B).$$

4. (a) Give the definition of logarithm,

(b) Find $\log_5 25$, $\log_5 (0.2)$, $\log_5 (0.04)$, without using tables.

5. Two railroad tracks cross at an angle of 75° . On one of them a train running at 30 mi. per hr. passes the junction

at 12 o'clock. A train running at 40 mi. per hr. on the other track passes the junction at 12.05 o'clock. How far apart are the two trains at 12.20 o'clock?

6. Find all the values of x between 0 and 360 degrees which satisfy the equation

$$2 \cos^2 x + 3 \sin x = 3.$$

7. A is an acute angle and $A + B = 180^\circ$. $\tan B = -2$. Find $\sin \frac{A}{2}$, without using tables.

SPHERICAL TRIGONOMETRY

1. Given a spherical triangle ABC , tell what is meant by its polar triangle $A'B'C'$. Show now that ABC is the polar of $A'B'C'$.

2. Derive the theorem of cosines for oblique spherical triangles.

3. Prove $\sin \frac{1}{2} B = \sqrt{\frac{\sin(s-a) \sin(s-c)}{\sin c \sin a}}$.

4. A ship sails along the arc of a great circle which passes due east through Boston (lat. $42^\circ 21' N.$; long. $72^\circ 4' W.$). If its rate is 16 knots per hr., find its lat. and long. 48 hours after leaving Boston.

5. If in a right spherical triangle $b = 2a$, prove that $\cos c = 2 \cos^3 a - \cos a$.

6. Find the length of the side a of a spherical triangle with $A = 60^\circ$, $B = 80^\circ$, $C = 100^\circ$.

PLANE AND SPHERICAL TRIGONOMETRY

1. (a) Give the definition of a logarithm.
(b) Find $\log_5 25$; $\log_5 (0.2)$; $\log_5 (0.04)$; without using tables.
2. Derive the theorem of cosines for oblique spherical triangles.
3. Prove the identity
$$\sin^2 A - \sin^2 B = \sin (A + B) \sin (A - B).$$
4. A ship sails along the arc of a great circle which passes due east through Boston (lat. $42^\circ 21'$ N.; long. $72^\circ 4'$ W.). If its rate is 16 knots per hour, find its lat. and long. 48 hours after leaving Boston.
5. If in a right spherical triangle $b = 2a$, prove that
$$\cos c = 2 \cos^3 a - \cos a.$$
6. Find all the values of x between 0 and 360 degrees which satisfy the equation
$$2 \cos^2 x + 3 \sin x = 3.$$

PHYSICS

GROUP A

Answer two questions from this group.

1. A body, starting from rest, moves with uniformly accelerated motion. If it moves 800 ft. in 8 sec., what is its average velocity for that time? What velocity does it have at the end of 8 sec.? What is its acceleration?
2. State the energy transformations that occur when a trolley car, under partial control by means of brakes, coasts down an incline with acceleration. What is meant by mechanical advantage, mechanical efficiency? Illustrate your answers by reference to a movable pulley.

3. If a pressure gauge attached to a water faucet reads 80 pounds per sq. in., how high is the top of the water in the supplying reservoir above the faucet? One cubic foot of water weighs 62.5 pounds. About how high can a "suction" pump raise mercury from a vessel exposed to the atmosphere? Why not higher?

GROUP B

Answer three questions from this group.

4. Explain the nature of heat transfer (1) when one end of a rod is heated by holding the other end in a flame, (2) when one burns his face in front of a fire place fire.

5. Describe fully one experiment you have performed in heat for the measurement of some physical quantity. Show carefully how the observed data were used to determine the final result. State what precautions should be taken in this experiment to avoid errors.

6. Describe the Bunsen photometer and tell how it is used to determine the candle power of some source of light. Show by diagram how a spectrum may be obtained. Why does a piece of red cloth look red when it is illuminated by white light? How would the same cloth look when illuminated by blue light? Explain.

7. Show by diagram the nature of the vibration when a stretched string is sounding its fundamental, its first overtone. What relation exists between the frequencies of vibration in these two cases. If sound travels 1100 ft. per sec., what is the wave length of a sound wave having a frequency of 500 vibrations per sec.?

GROUP C

Answer two questions from this group.

8. What is an electroscope? Given an electroscope, charged positively, explain how it could be used to determine the sign of an unknown charge. Why does a positively charged rod attract an uncharged conductor?

9. Ten, 25 watt lamps are connected in parallel to a power circuit across the terminals of which is maintained a potential difference of 110 volts. Find the cost of operating these lamps for 90 hours at 10 cents per kilowatt-hour. What is the resistance of one of these lamps? What current would flow thru 5 of these lamps if they were connected in series across this same circuit?

10. What determines the magnitude of an induced electromotive force? Why is a commutator a necessary part of a direct current generator? Explain.

CHEMISTRY

(Entrance credit in chemistry does not carry with it University credit in any course in chemistry in Cornell University. Applicants for University credit in Introductory Inorganic Chemistry, Course I, who have received permission from Mr. Hoy, should take the examination for University credit also being held in this room.)

Answer eight questions only.

(Atomic Weights: $H = 1$, $C = 12$, $O = 16$, $Ca = 40$).

I. Define in your own words, and illustrate any ten of the following terms: (a) Acid, (b) Molecular Weight, (c) Atom, (d) Ion, (e) Fractional Distillation, (f) Efflorescence, (g) Hydrocarbon, (h) Electrolysis, (i) Sublimation, (j) Polymer, (k) Element.

II. Describe, with sketch, an experiment by means of which it may be shown that,

(a) carbon dioxide is heavier than air, and does not support combustion;

(b) water is formed by the combustion of dry hydrogen;

(c) Hydrogen may be obtained by decomposition of water;

(d) hydrogen is lighter than air, and does not support combustion.

III. Write empirical and structural formulas for any five of the following substances : ammonia, calcium carbonate, bismuth nitrate, potassium perchlorate, arsenic trisulphide, cupric sulphate, ammonium chloride.

Name any five of the substances represented by the following formulas : $Ca_3(PO_4)_2$, $BaSO_4$, $KClO_3$, AsH_3 , H_3AsO_4 , $NaHCO_3$, CaC_2 .

IV. Complete and balance each of the equations indicated below, using symbols or formulas throughout :

- (a) ammonium hydroxide + hydrogen chloride =
- (b) calcium hydroxide + carbon dioxide =
- (c) silver nitrate + sodium bromide =
- (d) chlorine + sodium iodide =
- (e) sodium chloride + (conc.) sulphuric acid + manganese dioxide (heated) =
- (f) nitric oxide + oxygen =
- (g) methane + oxygen (ignited) =
- (h) sodium carbonate + silicon dioxide (heated) =
- (i) lead nitrate + hydrogen sulphide =
- (j) sodium nitrate + (conc.) sulphuric acid (heated) =

V. Describe briefly commercial methods for the preparation of any five of the following products : (a) charcoal, (b) soap, (c) bleaching powder, (d) ammonia, (e) carborundum, (f) sulphuric acid, (g) water gas, (h) pig iron.

VI. What is meant by the term Fixation of Nitrogen? Describe any one of the commercial processes used for this purpose.

Give two important uses of the product obtained.

VII. State Boyle's Law and the Law of Charles. What would be the effect upon the volume of a given sample of gas, of (a) doubling the pressure, (b) reducing the pressure to one-third of its original value, (c) raising the temperature from 0° to $91^\circ C$?

What volume of carbon dioxide gas, measured under standard conditions, would be liberated by treatment of 100 grams of calcium carbonate with hydrochloric acid?

VIII. How may ozone be prepared?

What are the properties of ozone?

What energy change takes place during the formation of ozone?

Name two uses to which ozone is put.

In what principal forms does sulphur occur in nature?

How is sulphur obtained commercially in this country?

IX. Name five substances, in the manufacture of which a knowledge of chemistry is required, that are of importance in connection with the war, and tell what you can of the uses to which they are put.

BOTANY

1. Explain how the structure of leaves is related to their function.

2. Mention and describe briefly different parts of plants which are used as storage organs.

3. Mention advantages secured by (a) vegetative reproduction of plants, (b), reproduction by seed.

4. By what characters are dicotyledons distinguished from monocotyledons?

5. What is meant by *Alternation of Generations*? Describe the life cycle of a fern.

6. Mention the characters by which bryophytes are distinguished from pteridophytes, and those by which pteridophytes are distinguished from spermatophytes.

7. Explain the statement that certain flowering plants are more highly specialized than others. Mention flowering

plants belonging to five different families and arrange them according to the degree of their specialization.

8. Mention some of the causes of plant diseases and the way in which the diseases affect the plant.

9. Give a detailed description of some important physiological process in a plant and describe an experiment by which the process may be demonstrated, giving drawings of the apparatus employed in the experiment.

10. Select five seeds and describe the mechanism by which they are in each case distributed.

ZOOLOGY

For 1 unit answer all questions. For one-half unit answer any five.

1. What is respiration in animals? Explain the mode of respiration in each of the following: ameba, hydra, earth worm, crayfish, perch, frog, and rabbit.

2. Make and label a diagram showing all of the external structures of a fish or a turtle.

3. Describe the mode of locomotion of each of the following: fish, frog, squirrel, bird, snake, and flying squirrel. Explain how each is adapted to its particular mode.

4. Explain how the turtle differs from the frog in method of development.

5. What means of protection has each of the following animals: ameba, hydra, earth worm, clam, crayfish, house fly, and porcupine?

6. Name the parts of the alimentary canal of any back-boned animal and explain the functions of each in the process of digestion.

7. Describe the structure and habits of some protozoan you have actually studied with the microscope. Make and label a diagram.

8. Name the appendages of the crayfish and mention the function of each.

BIOLOGY

State briefly what biological subjects you have studied, with what proportion of recitation and laboratory work and for what periods. Any laboratory books or other work done in such courses may be submitted as supplemental to the answers to be written to the following questions.

Answer any ten questions, including two from each Group.

GROUP 1.

1. Name 5 great biologists of the past, 2 English, 1 German, 1 French, 1 American. Give approximate date of activity and field of work.

2. Name 5 birds native of this country (two of which to be aquatic or semiaquatic). Mention the food of each and state method of securing this food.

3. Make a labelled drawing of a side view of a frog, indicating the position of the alimentary canal and its appendages.

GROUP 2.

1. Discuss the interrelations of flowers and insects. Define parasite, saprophite.

2. Define protoplasm. Draw a typical plant cell labelling all parts.

3. Describe the proper method of canning fruit and give reasons for using the method described.

GROUP 3.

1. Define dicotyledon, family, genus, gymnosperm. Describe and illustrate the structure of the flower of one of the leguminous plants.

2. Distinguish between homology and analogy. Give examples.

3. Name and give the differential characters of 4 classes of arthropods.

GROUP 4.

1. Describe and sketch the reproductive organs of the moss or chara. Describe the manner of fertilization.

2. Compare the blood of an invertebrate (*e.g.* earthworm) with that of a mammal as to composition and function.

3. Illustrate by diagrams the cellular structure of an earthworm. Describe its mode of increase.

GROUP 5.

1. Where does a plant get its nitrogenous food? Explain the process of photosynthetic assimilation. What is formed as a result of the process? What conditions are necessary?

2. What nutrients are contained in crackers and cheese? In what part of the alimentary canal and by what digestive fluids is each of these nutrients largely digested?

3. Describe the breathing of a clam. State what gases are exchanged in this process and explain the necessity for this exchange.

PHYSICAL GEOGRAPHY

For full unit of credit answer all questions.

For half unit answer 1, 4, 6, 7, 8.

1. Describe the *Till Sheet* or *Ground Moraine* of the Continental Glaciers; making clear its difference in form and composition from that of *Terminal Moraines* and *Outwash Plains*.

2. (a) Explain why the northwest Pacific Coast of North America, to the south of the Aleutian Islands, has a very wet and equable climate.

(b) Define *equable climate*, fully and clearly.

3. (a) Why have *Earthquake Waves* such great height where they advance on low coasts?

(b) How do they differ in origin and occurrence from a *Tidal Bore*?

4. What is meant by an *Escarpment*? Show the form of an escarpment by a diagrammatic sketch. How do *Mesas* differ from escarpments in form?

5. (a) Why, and under what conditions in the normal development of a river valley, are *Flood Plains* formed in its lower course?

(b) Why does the outflowing stream from a lake only slowly cut down the level of the outlet?

6. (a) Distinguish between a *Cyclone* and a *Tornado*.

(b) Why does rain or snow usually fall in the southeastern quadrant of a "*Low*"?

7. (a) What is a *Contour Line* on a map? (b) What is meant by *Contour Interval*? (c) Illustrate your definitions of the above by making a sketch contour map showing a gorge valley cut in the slope of a long ridge.

8. (a) What is *Quartz*? (b) What is the origin of most *Sand*, that is, what is the material of the little grains and whence does it come? (c) How does *Granite* differ from *Limestone* in resistance to weathering?

BOOKKEEPING

For one-half unit answer questions 1-4 inclusive ; for one unit answer all questions.

1. (a) What is the function of the journal? Of the ledger?

(b) Name and define four kinds of accounts which are found in a double entry ledger.

2. Write and post the journal entries for the following transactions :

- (a) Invest \$1,000 in cash.
- (b) Buy an office desk for \$125 from the Broadway Furniture Company and pay cash on account \$50.
- (c) Pay rent in advance for one month \$50.
- (d) Draw for personal use \$25 cash.
- (e) Buy \$500 worth of merchandise on account from Adams & Co.
- (f) Sell \$75 of merchandise for cash.
- (g) Return to Adams & Co. \$50 worth of merchandise which is unsatisfactory.
- (h) Pay Adams & Co. \$200 on account.
- (i) Pay wages for one week \$18.
- (j) Sell J. Jones \$100 worth of merchandise and receive \$50 on account.

3. From the following facts determine by opening the necessary accounts the gross merchandise profit for the month of January. Goods on hand Jan. 1, \$1,580; Purchases during January, \$1,600; Freight in on Purchases \$82.50; Purchases returned \$75; Sales \$2,125; Sales returned \$125; Goods on hand January 31, \$1,400.

4. (a) On January 1 an insurance premium of \$50 is paid for one year's insurance on a stock of goods. On March 31st the books are closed. Show the insurance account at the latter date.

(b) The net profit for the quarter is \$250. Show how this fact appears in the ledger accounts concerned.

5. From the following trial balance and supplementary information, prepare a Profit and Loss and a Financial Statement :

TRIAL BALANCE A. B. COMPANY

DECEMBER 31, 1916

| | | |
|---------------------------------------|---------------------|---------------------|
| Land and Buildings | \$6,000 00 | |
| Furniture and Fixtures | 1,250 00 | |
| Inventory, January 1, 1916 | 17,500 00 | |
| Accounts Receivable | 14,576 15 | |
| Cash | 1,475 80 | |
| Good-will | 7,500 00 | |
| Mortgage on lands and buildings | | \$4,000 00 |
| Accounts Payable | | 6,469 78 |
| Bills Payable | | 7,024 41 |
| Reserve for Bad Debts | | 400 00 |
| General Expense | 2,142 76 | |
| Travelling Expenses | 2,260 84 | |
| Advertising | 769 24 | |
| Salaries | 5,420 00 | |
| Taxes | 287 40 | |
| Commissions | | 10,341 00 |
| Purchases | 49,456 58 | |
| Purchases Discount | | 587 39 |
| Sales | | 56,900 17 |
| Sales Discount | 2,083 98 | |
| A, Capital | | 12,500 00 |
| B, Capital | | 12,500 00 |
| | <u>\$110,722 75</u> | <u>\$110,722 75</u> |

SUPPLEMENTARY FACTS.

Depreciation on Land and Buildings is 3%, Furniture and Fixtures 2%. Total allowance for Bad Debts should be 5%. Inventories: Merchandise \$18,000. Commissions due us \$260. Unpaid interest on mortgage \$60. Unpaid taxes \$32. Stationery and stamps on hand, \$68. Advertising expense prepaid \$75.

GENERAL AGRICULTURE

For one-half unit answer any five questions, for one unit answer ten questions.

1. What is meant by "field crops"? Legumes? Small fruits? Give two or more examples of each.

2. What are some of the leading "cash crops" raised in New York? Is silage corn considered a cash crop? Why?
3. What are "crop rotations"? Outline a crop rotation that includes a legume; one without a legume.
4. What are the chief differences in conformation between dairy and beef types of cattle? Name several breeds of each type.
5. What are the leading branches of the dairy industry?
6. What are the leading sources of revenue, from the poultry industry? Into what two main classes are the breeds of hens divided? Name a leading breed in each class.
7. Locate three important peach-growing regions in the United States; two leading orange regions; two apple regions.
8. Describe methods used (*a*) to determine, (*b*) to correct "sourness" or "acidity" in soils.
9. Name three states in "the corn belt." Name one state where spring wheat is extensively grown and one where winter wheat is extensively grown?
10. Name three tillage implements. Name four harvesting implements.
11. Name three important breeds of (*a*) sheep and (*b*) swine.
12. Name any region with which you are familiar and give the usual yields per acre of five crops commonly grown there. Also give the approximate time of planting and approximate time of harvesting each of these crops.

DRAWING

Two examinations are given, one in freehand drawing and one in mechanical drawing. Applicants may take either, or by special arrangement may take both. The examination will be given and judged on the assumption that

those taking it have had approximately 150 actual hours of instruction and practice for each $\frac{1}{2}$ credit point desired. One (1) point is the maximum credit allowed in the subject. It will be an advantage to candidates taking the examination to present samples of their work, and a teacher's statement showing time and proficiency.

FREEHAND DRAWING

For this examination the applicant is required to make a pencil sketch of an object or group of objects. The objects used may be geometrical blocks with straight and curved lines and curved surfaces, simple pieces of pottery, furniture, or models with simple lines and surfaces. The purpose of the examination is to test the ability of the applicant to draw accurately and sympathetically just what he sees. Shading may or may not be required.

MECHANICAL DRAWING

Questions may call for instrumental drawing of geometric constructions, orthographic and isometric projection, oblique section and intersection of solids, surface developments, etc., and working drawings of machine details, as bolts, nuts, pulleys, gears, various simple castings, etc. Data for the problems in any given examination will be furnished in the form of descriptive text, sketches, or photographs with dimensions marked or stated.

MANUAL TRAINING

Examinations will be offered in woodworking, forging, foundry work, and machine work. To satisfy the entrance requirement the applicant must have performed not less than 300 hours of actual work in the subjects in which the examination is taken. Candidates must present a teacher's statement of the time actually spent in the work and of the proficiency attained therein.

SCHOLARSHIP EXAMINATION PAPERS

ENGLISH

PART I—*Answer all four questions.*

How sleep the brave who sink to rest
 By all their country's wishes blest !
 When Spring, with dewy fingers cold,
 Returns to deck their hallowed mould,
 She there shall dress a sweeter sod
 Than Fancy's feet have ever trod.

By fairy hands their knell is rung ;
 By forms unseen their dirge is sung ;
 There Honour comes, a pilgrim grey,
 To bless the turf that wraps their clay ;
 And Freedom shall a while repair,
 To dwell, a weeping hermit, there !

1. *a.* Point out, in a single paragraph, some literary excellences in the poem above.

b. Explain the poet's meaning in lines 3-6 (*when—trod*).

2. Write a composition four or five pages in length on one of the following topics :

My work during the past summer.

War-time restrictions.

The stories of Irving (or of Hawthorne).

What I have learned by collecting stamps (or coins or autographs).

Milton's services for liberty.

Washington's discussion of national union.

The addresses of President Wilson.

Epigrams.

The Spanish main.

3. Define five of the following words : *barter, vocation, Godspeed, indemnity, meed, dire, corporal, homage.*

4. Explain five of the following phrases : " a nine days' wonder," " the handwriting on the wall," " Damon and

Pythias," "hoist with his own petar," "a good Samaritan,"
"e pluribus unum," "to look a gift horse in the mouth,"
"the bend sinister."

PART II—*Answer one question.*

1. What national virtues, Roman or French or English, does Shakespeare make prominent in any one of his historical plays?

2. The following quotations are from *Paradise Lost*. Explain how any one of them recalls a passage or a sentiment in one of Milton's minor poems.

Fairy elves,
Whose midnight revels, by a forest side
Or fountain, some belated peasant sees.

God and good angels guard by special grace.

He and his horrid crew lay vanquished.

When night
Darkens the streets, then wander forth the sons
Of Belial flown with insolence and wine.

That golden scepter which thou didst reject
Is now an iron rod.

3. Show by mention of specific incidents that Bedivere deserves the description, "bold in heart and act and word."

4. What do you understand by lyric poetry? Illustrate by reference to poems of Wordsworth and Shelley and Keats.

PART III—*Answer one question.*

1. Of any oration that you studied in school give (*a*) the occasion of its delivery; (*b*) the character of the audience; (*c*) its historical importance; (*d*) some instances of rhetorical or oratorical style.

2. Of any essay that you studied in school give (*a*) the author's purpose; (*b*) the present value or importance of the subject and of the essay; (*c*) some characteristic features of the author's style.

GREEK

A

TRANSLATION AT SIGHT

From Xenophon's *Anabasis* (VII 3) :

Ἀκούσαντες ταῦτα καὶ δεξιὰς δόντες καὶ λαβόντες ἀπήλαυνον· καὶ πρὸ ἡμέρας ἐγένοντο ἐπὶ τῷ στρατοπέδῳ καὶ ἀπήγγειλαν ἕκαστοι τοῖς πέμψασιν. ἐπεὶ δὲ ἡμέρα ἐγένετο, ὁ μὲν Ἀρίσταρχος πάλιν ἐκάλει τοὺς στρατηγούς καὶ λοχαγούς· τοῖς δ' ἔδοξε τὴν μὲν πρὸς Ἀρίσταρχον ὁδὸν εἶσαι, τὸ δὲ στράτευμα συγκαλέσαι. καὶ συνῆλθον πάντες πλὴν οἱ Νέωνος· οὗτοι δὲ ἀπείχον ὥς δέκα στάδια ἐπεὶ δὲ συνῆλθον, ἀναστὰς Ξενοφῶν εἶπε τάδε ἄνδρες, διαπλεῖν μὲν ἔνθα βουλόμεθα Ἀρίσταρχος τριήρεις ἔχων κωλύει, ὥστε εἰς πλοῖα οὐκ ἀσφαλὲς ἐμβαίνειν· οὗτος δὲ ὁ αὐτὸς κελεύει εἰς Χερρόνησον βία διὰ τοῦ ἱεροῦ ὄρους πορεύεσθαι· ἣν δὲ κρατήσαντες τούτου ἐκείσε ἔλθωμεν, οὔτε πωλήσειν ἔτι ὑμᾶς φησιν ὥσπερ ἐν Βυζαντίῳ, οὔτε ἐξαπατήσεσθαι ἔτι ὑμᾶς, ἀλλὰ λήψεσθαι μισθόν, οὔτε περιόψεσθαι ἔτι ὥσπερ νυνὶ δεομένους τῶν ἐπιτηδείων.

Μετὰ ταῦτα ἐδίδοδοτο λέγειν τῷ βουλομένῳ· καὶ ἔλεγον πολλοὶ κατὰ ταῦτά ὅτι παντὸς ἄξια λέγοι Σεύθης· χειμῶν γὰρ εἷη καὶ οὔτε οἵκαδε ἀποπλεῖν τῷ τούτῳ βουλομένῳ δυνατόν εἷη. διαγενέσθαι τε ἐν φιλίᾳ οὐχ οἷόν τ' εἷη εἰ δέοι ὠνούμενους ζῆν ἐν δὲ τῇ πολεμίᾳ διατρίβειν καὶ τρέφεσθαι ἀσφαλέστερον μετὰ Σεύθου ἢ μόνους ὄντων ἀγαθῶν τοσούτων· εἰ δὲ μισθὸν προσλήψοιντο, εὖρημα ἐδόκει εἶναι. ἐπὶ τούτοις εἶπε Ξενοφῶν, Εἴ τις ἀντιλέγει, λεγέτω· εἰ δὲ μή, ἐπιψηφίζέτω ταῦτα. ἐπεὶ δὲ οὐδεὶς ἀντέλεγεν, ἐπεψήφισε, καὶ ἔδοξε ταῦτα. εὐθὺς δὲ Σεύθῃ εἶπε ταῦτα, ὅτι συστρατεύσονται αὐτῷ.

B

GRAMMAR

1. Give the principal parts of πάσχω, λαμβάνω, λείπω, ἵστημι.

2. Give the complete inflection (all forms) of the aorist passive of λύω.

3. In what circumstances do you use the ἵνα of purpose with the subjunctive? the optative? the indicative?

4. In what circumstances do you use ἄν with the indicative? with the infinitive?

5. Distinguish between μετά with genitive and accusative.

C

COMPOSITION

After that the general brought together his soldiers and spoke as follows: "Do not think, men, that I have ordered you to assemble, to praise you. For that you did wrong in pelting me will be evident to all, I think, before I stop speaking." When the soldiers heard this, there arose a great outcry. Some were unwilling to remain and others shouted that they should listen to what he wished to say.

GERMAN

I.

Translate:

1. Goethe hatte sich mir gegenüber gesetzt, und wir sprachen noch über allerlei Dinge. Dann verweilten wir wieder bei Lord Byron, und es kamen die mancherlei Unfälle zur Erwähnung, die sein späteres Leben getrübt, bis zuletzt ein zwar edles Wollen, aber ein unseliges Geschick ihn nach Griechenland geführt und vollends zugrunde gerichtet.

„Überhaupt,“ fuhr Goethe fort, „werden Sie finden, daß im mittleren Leben eines Menschen häufig eine Wendung eintritt, und daß, wie ihn in seiner Jugend alles begünstigte und alles ihm glückte, nun mit einem Mal alles ganz anders wird, und ein Unfall und ein Mißgeschick sich auf das andere häuft.“

Wissen Sie aber, wie ich es mir denke? — Der Mensch muß wieder ruiniert werden! Jeder außerordentliche Mensch hat eine gewisse Sendung, die er zu vollführen berufen ist. Hat er sie vollbracht, so ist er auf Erden in dieser Gestalt nicht weiter vonnöten, und die

Vorsehung verwendet ihn wieder zu etwas anderm. Da aber hienieden alles auf natürlichem Wege geschieht, so stellen ihm die Dämonen ein Bein nach dem andern, bis er zuletzt unterliegt. So ging es Napoleon und vielen andern.

Jason.

Nun, König, rüste dich zum Todeskampf !
Die Bande, die mich hielten, sind gesprengt.
Auf, rüste dich ! Es gilt dein Heil und Leben !

(Zu Medeen)

Du aber, die hier stumm und bebend liegt,
Das Angesicht so feindlich abgewandt,
Leb' wohl ! Wir scheiden jetzt auf immerdar.
Es war ein Augenblick, wo ich gewähnt,
Du könntest fühlen, könntest mehr als hassen,
Wo ich geglaubt, die Götter hätten uns
Gewiesen an einander, dich und mich.
Das ist nunmehr vorbei. So fahre hin !
Du hast das Leben zweimal mir gerettet,
Das dank' ich dir, und werd' es nie vergessen
In ferner Heimat, und nach langen Jahren
Will ich's erzählen in dem Kreis der Freunde,
Und fragt man mich und forscht : Wem gilt die Träne,
Die fremd dir da im Männerauge funkelt ?
Dann sprech' ich wohl in schmerzlicher Erinnerung :
Medea hieß sie, schön war sie und herrlich,
Allein ihr Busen barg kein Herz.

II.

1. Express in all six tenses of the indicative : a. *Ich halte es nicht aus* ; b. *Ich kann es nicht aushalten* ; c. *Ob ich es aushalte* ?

2. Give a German sentence illustrating the use of the indicative in indirect discourse ; the subjunctive. Is there any difference in meaning ? What tense have you used in each case and why ?

3. How does one express in German : Mr. Schmidt's books ; Doctor Schmidt's books ; the banks of the Rhine ; the people of Germany ; the University of Berlin.

4. Give a synopsis in the passive (all modes and tenses) of the third person singular of *erziehen*. What is the difference in meaning between *das Haus ist gebaut* and *das Haus wird gebaut*? What is the meaning of *es wird getanzt*?

5. Decline in the singular : *das grösste Glück, mein alter Vater, schönes Wetter, jedermann, dasselbe Haus*.

III.

1. Express in German : I sent for some books the other day. You see the book-dealer didn't have them in his store. He said I was to come again in a week and get them. He wasn't sure how much they would cost, but assured me the price would not exceed twenty marks. We have to use a good many books in some of our classes. Sometimes my father remarks that in his day they got along very well with less. But I tell him that only shows that the world is making progress. He says things are made too easy for the student nowadays.

2. Write in German some 150 words upon the relative attractiveness of spring and fall.

FRENCH

I. *Translate* : Breakfast is the great social meal in Oxford, the most popular occasion for entertaining friends and for being entertained. It is a solid comfortable meal, and after it the undergraduates are likely to sit and smoke and talk until well into the morning. After this there are newspapers (which Oxford men read with a diligence unknown to me among undergraduates anywhere else), and more genial company in the Junior Common Room, so that the man is lucky who finds time for one or two lectures, and

perhaps an hour of work, between breakfast and lunch. This meal is only a snack ; it is eaten at one, and by two all Oxford is out-of-doors in some variety of athletic costume, engaged in some of the many forms of out-door sport. Tea follows at about half-past four ; again there is an opportunity for interchange of hospitality, and again the time floats away in talk and smoke, so that some resolution is needed to get in an hour of reading before dinner. After dinner, which is eaten in the college hall,—black-gowned undergraduates at long tables down the middle and black-gowned Dons at the high table at one end,—there is another chance for the sociable man to entertain his friends at coffee in his rooms, and this event may prolong itself into an evening of bridge, or the company may separate to read an hour or two before turning in.

F. Aydelotte, *The Oxford Stamp*.

Translate : Un jour, en veine de confidence, il me prit à part et me dit : “ Mon cher monsieur, la dernière fois que j’ai mis un habit, c’était pour me rendre à une audience que j’ai sollicitée de l’empereur Napoléon III. A cette époque, L’Empire était sur le point de s’engager dans cette malheureuse affaire du Mexique, qui a bien été le commencement de tous nos malheurs. J’arrivais d’Amérique où j’avais collaboré à la création des premières voies ferrées et j’ose dire que, déjà, j’avais tiré mon épingle du jeu. J’étais un des rares Français qui eussent compris, alors, ce que valait la grande République unie ; j’étais jeune, ardent, ma conviction faisait mon audace. Je vis donc l’Empereur et je lui présentai respectueusement des observations que l’expérience et la réflexion avaient préparées, sur le projet de cette expédition que M. Rouher allait baptiser bientôt “ la grande pensée du règne ”. . . . — Je crains, dis-je à l’Empereur, que la politique française ne fasse fausse route. En intervenant au Mexique, elle va se mettre à dos la République des Etats-Unis, et c’est juste le contraire de ce qu’il conviendrait de faire. Les Etats du Nord ont le vent en poupe ; c’est avec les Etats du Nord qu’il faut

marcher. Votre Majesté dispose d'un instrument admirable, c'est la richesse acquise de la France. Les États-Unis ont besoin d'argent ; ils se sont engagés à fond dans la construction de leurs voies ferrés. Portez de ce côté les ressources disponibles du pays. Encouragez hardiment l'union des capitaux français et l'initiative américaine. Ne craignez rien ; l'affaire est bonne et elle payera. En faisant, dès le début, le premier choix parmi les grandes entreprises, la France recueillera un superbe bénéfice matériel et un incomparable bénéfice moral ; elle aura pris des arrhes sur le plus bel avenir qu'il y ait au monde ; elle se sera fait des amis tout en s'assurant des clients. Sire, ce n'est pas par la guerre et par les armes qu'il faut intervenir, c'est par la paix et par l'argent."

—G. Hanotaux, *La Politique de l'équilibre*.

III. Write a short composition on one of the following subjects :

- (a) L'importance de l'aéroplane dans la guerre actuelle.
- (b) Le rôle de la femme pendant la guerre.

LATIN

1. Write the genitive and ablative singular and the genitive and accusative plural of : *limen*, *sidus*, *gemitus*, *cor*, *sacerdos*.

2. Write the ablative singular and the accusative plural, feminine and neuter, of : *felix*, *vetus*, *dives*, *acer*.

3. Give the principal parts of : *fundo*, *ardeo*, *volvo*, *surgo*, *cano*, *seco*.

4. Give a synopsis in the third person singular (indicative and subjunctive, active and passive) of *veho* and *pello*.

5. Give all the tenses of the infinitive (active and passive) of *video*.

6. Give all the meanings of each of the following words when used (1) with the subjunctive, (2) with the indicative: *si*; *cum*; *ut*; *dum*.

7. State what construction or constructions are used with: *admoneo*, *avidus*, *noceo*, *interest*, *pudet*.

8. Write the comparative and superlative forms of: *asper*, *ambiguus*.

9. *Translate*:

Caesar postquam animadvertit, *Scipioni* auxilia fere, quae *expectasset*, omnia convenisse neque moram pugnandi ullam fore, per iugum summum cum copiis progredi coepit et brachia protinus ducere et castella munire propiusque Scipionem capiendo loca excelsa occupare contendit, ne adversarii *magnitudine* copiarum confisi proximum collem occuparent atque ita longius *sibi* progrediendi *eriperent* facultatem. Eiusdem collis occupandi Labienus consilium ceperat et, *quo* propiore loco fuerat, eo celerius occurrerat.

Account for the case of each italicized noun or pronoun and for the mood and tense of each verb in this passage.

10. *Translate into Latin, marking all long vowels in what you write*:

(1) The leader must be obeyed by all.

(2) He begs me not to go away.

(3) It concerns both you and him.

(4) O that he were only with us now!

(5) Do not ask me what to do.

(6) When he asked me whether my friend would remain at Rome one month or two months, I replied that I would not inform him, even if I knew. The friend referred to, however, told me a few days later, that he was going away from home on the first day of the next month to spend a few days in the country.

ADVANCED MATHEMATICS

1. A sets out from P for Q at the same time that B leaves Q for P . When they meet A has gone 40 miles more than B . A then finishes the trip to Q in 2 hours, and B the trip to P in 8 hours. Find the distance from P to Q .

2. Express the volume of a regular tetrahedron in terms of the length a of an edge.

3. What is the numerical value of $\tan 150^\circ$? of $\sin (\tan^{-1} 1/2)$? of $\tan^{-1} (\sin \pi/2)$?

4. In a triangle ABC , the perpendicular from the vertex A meets the base BC at the point D . If AD equals 6, BD equals 2, and DC equals 3, show that the angle BAC equals 45° .

5. The volume of a right circular cylinder is 45π cu. in. and the total area is 48π sq. in. Find the radius. How many correct results are there?

6. Given $\log 2 = .3010$ and $\log 3 = .4771$, find $\log 5\sqrt[3]{0.06}$.

7. Given that the length of the side of a regular decagon inscribed in a circle of radius R is $\frac{R}{2}(\sqrt{5} - 1)$, find the value of $\cos 18^\circ$ correct to three decimal places.

8. Find the length of the equal sides of an isosceles triangle if the angle between these equal sides is 45° and the third side is 10 inches.

ELEMENTARY MATHEMATICS

1. Of two casks one contains a certain number of gallons of water and the other one-half as many gallons of wine; 6 gallons are drawn from each cask and then emptied into the other, after which it is found that the percentage of wine is the same in the one cask as in the other. How many gallons of water did the first cask contain?

2. Perform the indicated operations and simplify :

$$\left(a^2 - b^2 + \frac{4ab(a+b)}{a-b}\right) \div \left(\frac{a^2 + b(b+2a)}{2a^2 - 3ab + b^2}\right) + b^2 - ab - 2a^2$$

3. The parallel sides of a trapezoid are 14 and 26 and the two non-parallel sides are 10 each. Find the area of the trapezoid.

4. Find the value or values of x satisfying the equation

$$\sqrt{x-4} + x = 1 + \sqrt{x^2-7}$$

5. Construct a point in a given straight line such that the difference of its distances from two fixed points on opposite sides of the line shall be the greatest possible.

6. The sum of the medians of a triangle is less than the sum of the three sides and greater than three-fourths their sum.

7. A point on the circumference of a circle having a radius of 5 inches is the center of a smaller circle. A common tangent is 3 inches long ; find the radius of the smaller circle.

8. The square described on the hypotenuse of a right angle triangle is equivalent to the sum of the squares on the other two sides.

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